Café as a public urban space

A questioning into architectural adaptability and multiplicity of use

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Master's Thesis
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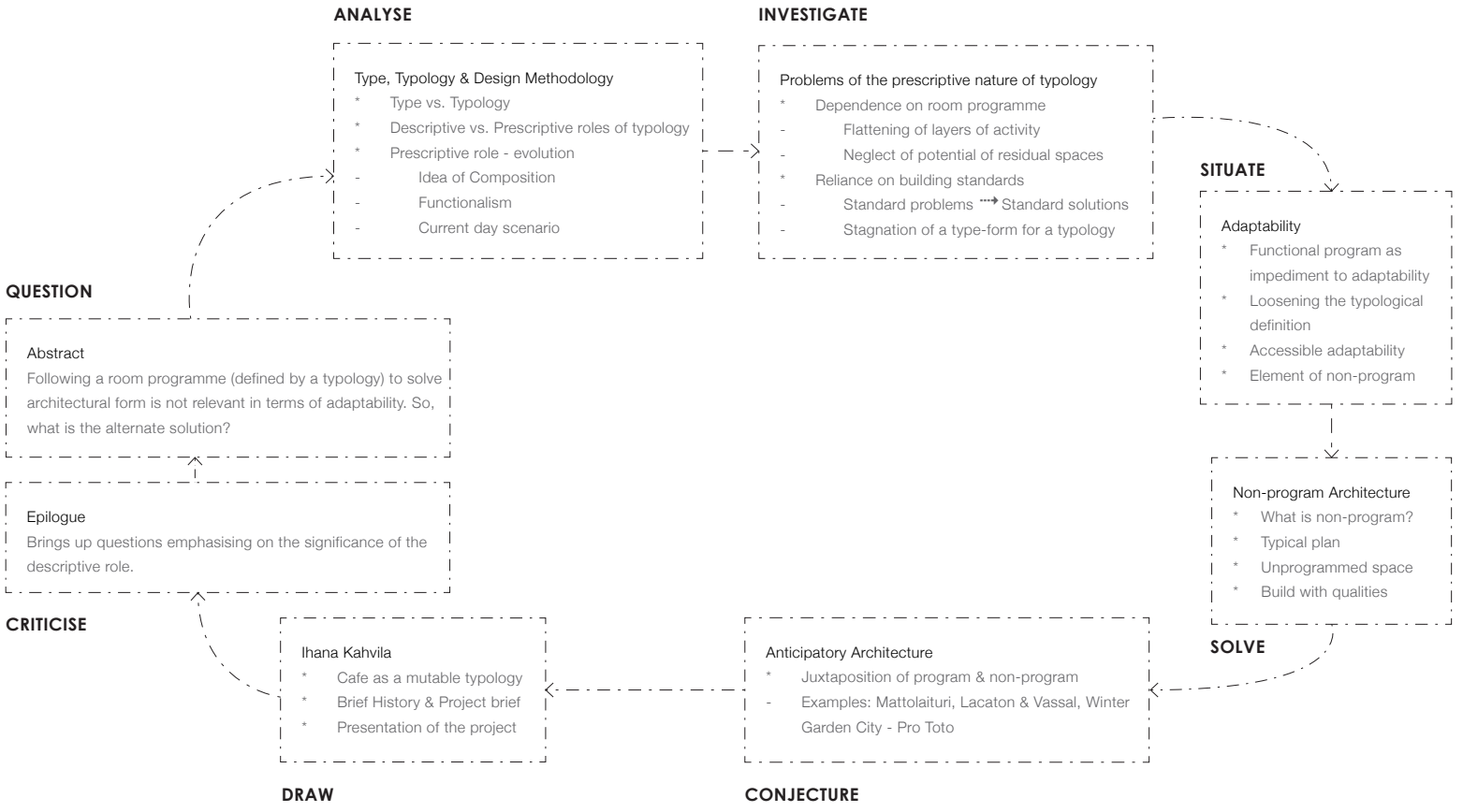
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ABSTRACT

Every architectural project is introduced through its typology.[1] The idea of a functional building typology, has become so embedded in everyday life, that it has become the commonest way to refer to a building as a bank, a school or a hospital. This practice aids easy communication. Professionally, the typological question is recursive in architectural discourse and has had great bearing on its ontological understanding.[2] But function, is only an indicator of what happens in a building and not an adequate descriptor.[3] Consequently, an inadequate descriptor becomes an inadequate design driver. However, the definition of a functional typology abstracted to form a room programme plays a huge role in contemporary design processes.[4] This idea of solving the form of a building on the basis of a pre-existing programme derived from the functions of a building has prevailed because it affords architects a rationale that supports their proposition.

This thesis, initially analyses the pros and cons of this prescriptive role of typology in the design process. The enquiry is aimed at drawing some conclusions to the questions - Of what relevance is a functionally driven architectural program in terms of adaptability? Does being adaptable mean being transparent to function? How can architects enable new architecture to anticipate newer layers of activity and to embrace change of use? At the crux of the whole diploma work, is the question,

"If a plan did not evolve in response to 'functional' needs, neither would it have to change if there was change in use?"[5]

Inferences are drawn mainly from the analysis of public use buildings that are not monuments and are more prone to adaptive reuse and hence the conclusions are relevant to that category. The limitations of a functional program are investigated at the outset leading to a set of observations. Possibilities of addressing the observed set of limitations are discussed as inferential exercises with the intent of positioning the argument with regard to already existent architectural theories. The thus deduced conjecture is tested in the design of a proposed café in Kalasatama. The 'café' is a very mutable typology making it susceptible to quick and constant change of use. As a neutral urban place with huge potential for doubling up as a public space, it presents itself as a good case for testing the learning from the theoretical pondering.

One of the bigger goals of this diploma work is the bridging of theoretical pondering to pragmatic solutions. The client's brief for the proposed café shows a certain blurring in the typological definition and a need for versatile use, which triggered this line of questioning. The epilogue to the diploma work consists of a critical write-up of the building, written from the point of view of an architectural critic, reiterating the importance of questioning and criticism as the basis of every design process.

Keywords: Typology, Design Methodology, Adaptability, Public space.

1 Typology, in this diploma work, unless otherwise mentioned, refers to functional building typologies such as schools, hospitals etc.

2 Typological question, here, refers to how the idea of type/typology has been the basis of architectural production. Moneo.R., (1978), p.23

3 "buildings grouped by their use…..However, this understanding is limiting as the use of a building has shown to be independent from its building and evolves in time.", Lee.C.M., Glossary – Type, (2011)
Also, " The definition of 'use' in a building, however, is more complex, multi-layered and temporal than can be encompassed in a single descriptive term." 'Changing Building Typologies': Call for papers, (2014)

4 Koch.D., (2014), p.180.

5 Ibid., p.182.

PROLOGUE

This thesis marks the end of my Master's studies at Aalto University. The possibility of presenting work on a proposed project as a thesis in school that is offered here opens up new avenues of bridging study and practice. I started work on this thesis intending to make full use of this opportunity.

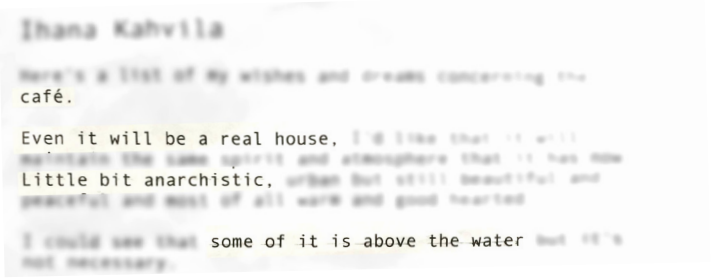
The project that is the result of this work is intended to house Ihana Kahvila, when the Sompasaari area in Helsinki is fully developed. This café, at the moment, functions in the summer from a container in the same area, amidst all the building activity. My meetings and e-mail exchanges with Sanni Jouhki, who runs the café, alerted me to some presumptive practices that we adhere to as architects. How much are we, as architects, influenced by the idea of a function-based typology? Is the definition of a building as a typology, which is so strongly present actually limiting us from looking into certain spatial possibilities? How often do we try to directly translate an area statement to sequential space?

Consequently, this thesis, at its core, takes a critical re-look at the overt dependence on the room programme in contemporary architectural design processes, in the context of this practice hindering the adaptability of buildings. As such, the diploma does not intend to challenge the very existence of the document but highlights those aspects of this dependence, which might prove to be limiting. The search for an alternative approach is undertaken by analysing ideas of non-program. I have used the technique of duality in argument to draw attention to the nature of the multiplicity that exists in the definition of function in a built space.

My aim in building this argument was to arrive at a conjecture that would address adaptability in public use buildings. Hence, the inferential and graphic exercises that constitute this inquiry deal with buildings of varying scales and typologies of different complexity. The theory part of the thesis has more weightage than the design scheme.

In order to make the entire process easily comprehensible, I have introduced every chapter by a flow diagram that graphically summarises the contents of the chapter. Important inferences or questions that lead to an observation are highlighted in italics. Specific moments in the communication with the client that triggered this enquiry are included as screenshots in the work and they function as chapter separators.

The central object of the critique, the room programme, which is a manifestation of the typological definition, is a predominant part of the design brief and design methodology today. While attempting to highlight its limiting aspects, I have also realised that the questioning of such basic, taken-for-granted practices also entails acknowledgement of the reasons for their prevalence. The epilogue intends to do this, thereby creating a loop to the questioning process.



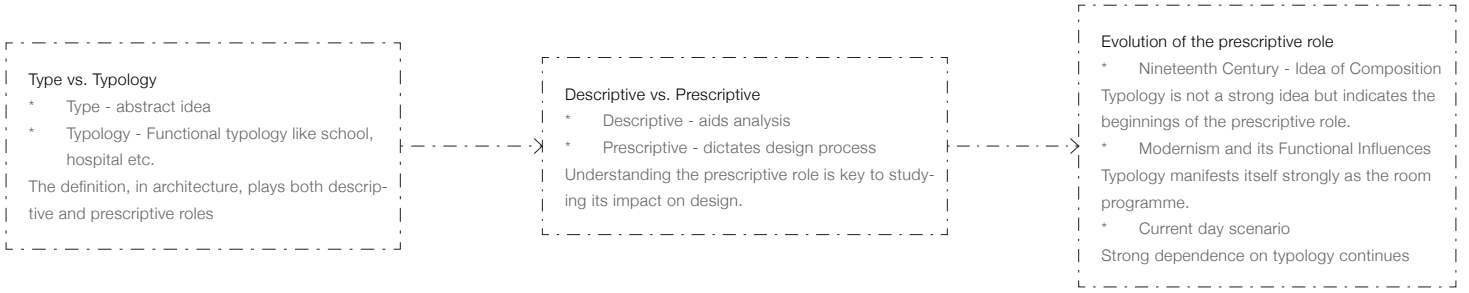
Ihana Kahvila

Here's a list of My wishes and dreams concerning the café.

Even it will be a real house, I'd like that it will maintain the same spirit and atmosphere that it has now Little bit anarchistic, urban but still beautiful and peaceful and most of all warm and good hearted

I could see that some of it is above the water but it's not necessary.

Written brief from client, First meeting, 11 - 3 - 2015.


Type vs. Typology
* Type - abstract idea
* Typology - Functional typology like school, hospital etc.
The definition, in architecture, plays both descriptive and prescriptive roles
Descriptive vs. Prescriptive
* Descriptive - aids analysis
* Prescriptive - dictates design process
Understanding the prescriptive role is key to studying its impact on design.
Evolution of the prescriptive role
* Nineteenth Century - Idea of Composition
Typology is not a strong idea but indicates the beginnings of the prescriptive role.
* Modernism and its Functional Influences
Typology manifests itself strongly as the room programme.
* Current day scenario
Strong dependence on typology continues

TYPE, TYPOLOGY & DESIGN METHODOLOGY

This chapter introduces the problem and defines major terminology used in the thesis. After analysing the two-fold nature of the typological definition and distinguishing between the two aspects - descriptive and prescriptive, it presents a brief history of the prescriptive role played by the typological definition in architectural design processes.

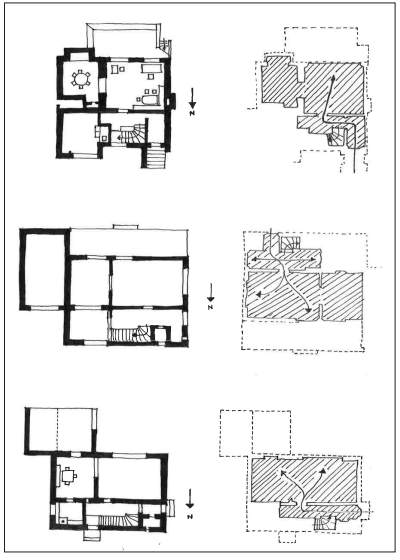
Type vs. Typology

Type, at its simplest, is defined as a category of people or things having common characteristics or attributes.[1] 'Type' in architectural discourse has manifested itself in the form of various theories proposed by theoreticians like Quartremere de Quincy, Laugier, Rossi, Vidler at different points of time.[2] These theories create different historical connections that substantiate architectural creation. In this manner, 'Type' as an idea and as a device has been the basis of all architectural production.[3]

'Typology', by definition, refers to the science or study of type.[4] The term 'typology', in contemporary use however, is most commonly used to describe a building that is typified based on its function/use like a bank, church etc. All references to the term, in this thesis, pertain to functional building typology. Although the classification of a functional building typology is distinct from the theoretical discourses on 'type' in architecture, the concept of type is the underlying structure of this taxonomical system.

The idea of assigning a certain function to a certain building has existed since ancient times, the definition of a typology as a precursor to design, however, was more recent. This typological definition and its impact on the architectural design process can be examined under two distinctive realms – the descriptive and the prescriptive.[5]

1 Oxford dictionary
2 Moneo.R., (1978), p.23 – 45.
3 Ibid., p.23.
4 Lee.C.M.C., The City as a project, Glossary, Type.
5 'Descriptive' and 'prescriptive' are self-explanatory terms. For purposes of this discussion, 'descriptive' includes all aspects of the definition that do not direct the design methodology.

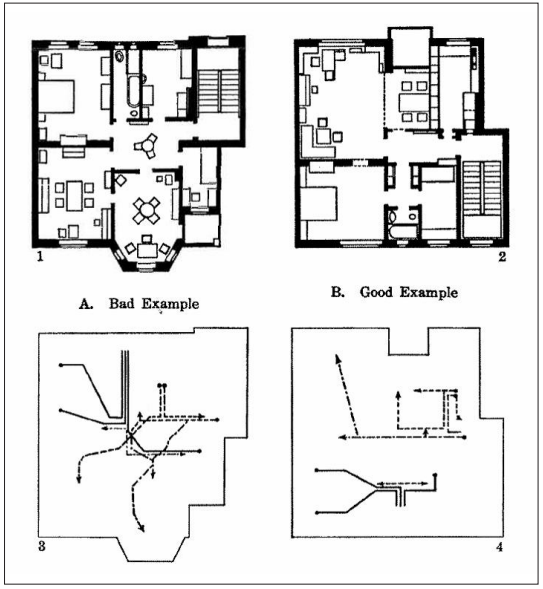


A Alexander Klein's circulation diagrams of single family houses (1934)

Descriptive vs. Prescriptive

The descriptive aspect of typology manifests itself often in everyday usage. It is a communicative device that helps acquaint the users with the built interface. In the scale of the city, definition of typology and its consequential zoning, aid way finding and provides a legible means of orienting users to the urban environment. At a more professional level, typology in a descriptive role presents itself as an excellent tool for analysis. This is evident from the analytical diagrams of Alexander Klein where he condenses the idea of type as an underlying structure.[6] One of his plates[7] shows a grouping of single-family houses compared with each other by reducing them into circulation diagrams. The idea of bringing together similar-use buildings and deducing common characteristics through diagramming is made possible by this view of the typological definition. Another plate[8] of his analytical diagrams shows a case where he justifies his 'Functional house for frictionless living' by juxtaposing it with a typical nineteenth century house. His diagrams throw light on the fragile nature of the boundary between the descriptive and the prescriptive domains of the typological definition. The diagrams in the first plate serve merely as a diagnostic tool that help deduce certain characteristics inherent in the planning and hence stay within the descriptive domain. The second plate could possibly be interpreted as a tool for justification. But the intent behind a 'frictionless house' implies use of these tools in the design methodology and hence already marks a shift into the prescriptive realm.

6 Moneo.R., (1978), p.35.
7 See plate A
8 See plate B



B Alexander Klein's Functional House for frictionless living (1935)

Typology could be an excellent frame of reference to study societal and systemic changes. For example the typology of a shop has evolved slowly from a very small home-shop system in the late 19th century to the more modern customer-seller relationship and further to the peruse and buy system of today. The series of socio-economic-cultural factors that triggered the various changes and the consequences of the changes reflected in the physical interface can be studied using the typology as a container for change. This method highlights various secondary factors that are pertinent to the creation of architecture such as the historical evolution of Industrialism, the social change of the rise of an affluent middle class, etc.[9] This understanding of the typological definition as engaging with other relevant factors beyond formal and functional considerations establishes more firmly the significance of the descriptive role played by typology.

The prescriptive role played by typology refers to the proactive role of a design-driver played by the typological definition in architectural design processes.

9 Koch.D., (2014), p.173.

Evolution of the prescriptive nature of typology

Nineteenth Century – Idea of Composition

Jean Nicholas Louis Durand's treatises on type, *Recueil* and *Précis* marked the beginnings of the prescriptive role of typology.[10] The *Recueil* is a compilation of large plates of drawings of historical buildings grouped by use and presented in a single composition of plans, elevations and sections – all drawn at the same scale.[11] It presents the user with a catalogue of buildings but does not intend to dictate or direct how this information is used.

The *Prècis* furthered this comparative method into a system of design. Durand defined fundamental elements of buildings as walls, slabs, columns, roofs, vaults and openings. After this initial list, he sets out a method of using the axes of composition to combine these elements to make parts of the building and then proceed to combine these parts to make a whole building.[12]

It is essential to note that the primary design drivers of the process that Durand advocates were convenience and economy. Spaces were arranged with attention to symmetry and regularity.[13] According to Durand's *Prècis*, utility manifested itself as ease of use rather than as 'functional space' as was defined by Modernists later.

Durand's work does not distinctly refer to the typological definition as part of the design process. But the act of sequencing the catalogue of typologies and the idea of composition of various fundamental building elements sets the stage for Modernism and the advent of the functional program.[14]

Modernism and its Functionalist influences

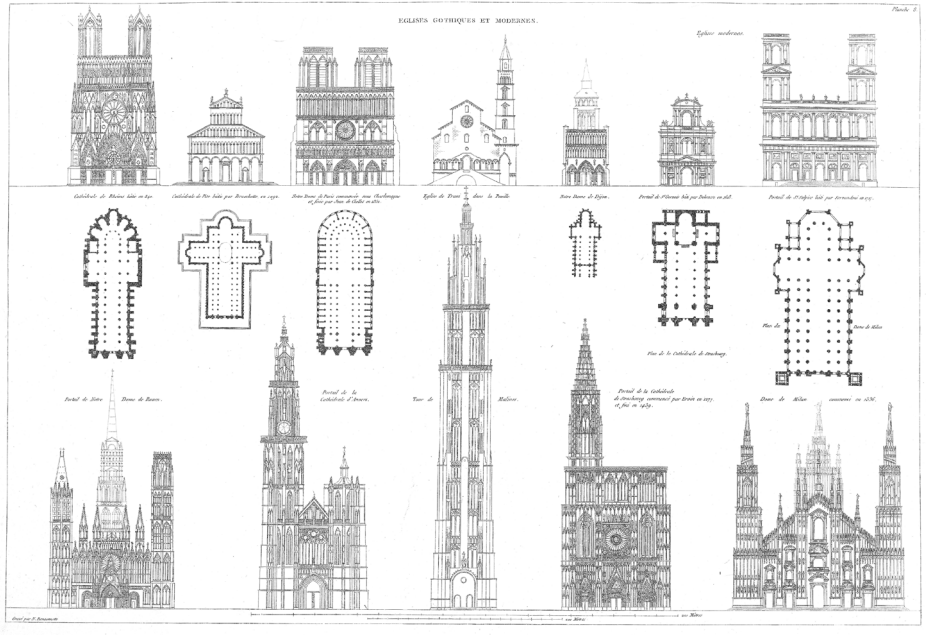
Modernism's strong association with Functionalism rendered function as the rationale behind the design process. This is most obviously illustrated by Louis Sullivan's often quoted phrase 'Form follows Function',[15] which is popularly acknowledged to be the gist of all Functionalist ideals. However, there is a fundamental split in the perception of function as a precursor to design and function as ascertained by the user. In order to properly comprehend how function becomes a precept to design, it is necessary to examine the Functionalist notion of 'function' more closely.

Function as a precept to design - Irresoluteness of the claim

The understanding of function in architecture and the development of thought in that trajectory had interesting parallels to the understanding of function in biology. Around mid nineteenth century, European architects like Viollet-de-Luc and Gottfried Semper were influenced by the functional classifications proposed by the

10 Recueil refers to Recueil et parallèle des edifices de tous genres, ancienes et modernes (1799-1801) and Précis to Précis des leçons d'architecture données à l'École Polytechnique (1802-1805)
11 See Plate C
12 Lee.C.M.C., (2013), p.191.
13 Moneo.R., (1978), p.28.

14 "….the "freedom" attained by this method anticipated the designs of modern building types almost a century later,…." , Lee.C.M.C., (2013), p.203.
15 Sullivan.L., (1896).



C Example of Durand's plate from Recueil showing churches.

LIBRARY	5000 sq. m.
Journals and periodicals	350 sq. m.
English	600 sq. m.
Vernacular and other Indian languages	700 sq. m.
Textbooks	650 sq. m.
Reference	200 sq. m.
Digital library	400 sq. m.
Central circulation desk and lobby	400 sq. m.
Staff and services	1500 sq. m.

D Room programme - example

French anatomist George Curvier.[16] They considered it a useful method to catalogue and study buildings. The influences can be seen more explicitly on comparison of Curvier's plates on Comparative Anatomy with those of Durand, who was also a contemporary.[17] These influences also manifested themselves as biological determinism in early Modernist theory wherein 'use' was translated to function-types in architecture that were analogical to organs of a bigger system.[18]

The problems of approaching the idea of function akin to biologists or other scientists become more evident when the difference in the role of architects as doers is compared with the role of scientists as observers.[19] Scientists study the function of forms that already exist and try to understand their interrelationship with other organs. The claim that function precedes form in the work of an architect refers to uses that are purported to be and are not already existent.[20] Recognizing this difference between 'actual functioning/performance' as understood by the biologists and 'intended functioning' as understood by the Functionalists[21] is crucial to deciphering why function as the major design driver maybe limiting design possibilities. These doubts raised on the heretofore-assumed unbiased nature of function also alert us to the fact that all buildings are mere predictions.[22]

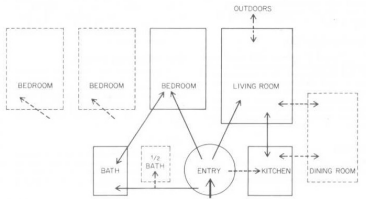
16 Ibid., pt.11.
17 Lee.C.M.C., (2013), p. 180-181.
18 Koch.D., (2014), p.180
19 Michl.J., (1997), pt.16.
20 Ibid., pt.13.
21 Ibid., pt.20-21.
22 "All buildings are predictions. All predictions are wrong. Almost no building adapts well. They are designed not to….", Brand. S., "How Buildings learn – 'Built for Change'", (1997).

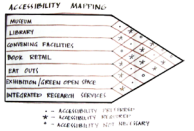
Functionalism and design methodology

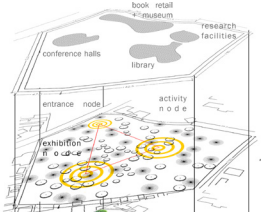
Modernism and its support of Functionalism strengthened the practice of expressing a typology as a functional programme and using that document as a precept to design.[23] Thus every architectural need was stated as a typology, which was then abstracted to numerical spatial requirements of primary and secondary functional spaces, which in turn, were translated into architectural design. Tools like matrices, proximity charts, movement diagrams and bubble diagrams aided the solving of the problem,[24] but are merely subservient to the room programme. Though these practices had their roots in Functionalism, they have transcended boundaries of style, movement or architectural language and improvised versions of these methods are fairly prevalent in architectural design processes today.[25] The questionable objective nature of 'function' as proposed by the Functionalists being the basis of this practice prompts more inquiry into these facets of the design process.

The room programme and secondary programming tools

The trajectory of thought that guides the formation of an architectural brief already begins shaping the impending solutions. The style of formulating the brief; the emphasis assigned to various affecting factors and very importantly the spatial requirements help set the tone of the design process. In the current architectural discourse, characterised by the absence of a strong movement or design ideal, it is







E Tools like matrices, proximity charts, movement diagrams and bubble diagrams aided the solving of the problem. Connectivity diagrams between pre-defined spaces helped define a certain sequence of spaces that corresponded to certain types of buildings. All these devices are subservient to the room programme.

23 Koch.D., (2014), p.180, 182
24 See plate E.
25 Koch.D., (2014), p.180.

the style of this brief formulation and the design process that it entails that distinguishes one architectural practice from another. In the scenario of competitions where all participants are working on the same brief, the interpretation of the terms set in the brief differs leading to different solutions. However the room programme is one document of factual information that stays a constant design driver in every entry. This document quantifies the expected built product and is indispensible to the economic and planning facets of the proposed project. Heavy dependence on this document in the design process, warrants questioning, as this method of tabulating quantitative data with no room for interpretation or alternative methods of approach might be seriously reducing the possibilities open to designers. The magnitude of the difference this questioning could create can be elucidated with the example of an imaginary architectural competition where the requirements are elaborated and the site with its context is specified but the brief is released without the room programme component. The diversity of the design options that would result from this would be markedly higher.

It has already been established that the unbiased nature of the functions that are tabulated is questionable. Creating specifically tailored spaces to house them exacerbates the split between the intended and actual functioning.

Functionalist architecture – the role of the architect, the users and the question of adaptability

Functionalist agenda, in a very disingenuous way, vests in the architect, the authority to decide on function or use since 'function' was purported to be the objective aesthetic of Functionalist architecture. In doing so, it only creates an illusion of addressing user's needs and marginalises the voices of those that are not vested with the socio-cultural-economic capital of deciding 'function'. Also by objectifying the role of function as an aesthetic it places the architectural product beyond commentary of the ordinary user.[26] Whether Functionalist architecture managed to address function as it initially proposed[27] or was successful as an aesthetic[28] is still debatable. Its wilful negligence of needs as perceived by the user, however, spurred several reactionary bottom-up endeavours such as participatory user-centred and user-initiated design projects. If biology is still used as an analogical filter to study parallels in architecture, Functionalism falls short of addressing Darwin's theory of evolution,[29] which in the architectural sense can be elucidated as internalising user feedback to create more appropriate solutions. This shortcoming has reduced the 'flow' of Functionalist architecture where the building seamlessly lends itself as a platform to change of use.[30] So, if a building were not designed to cater to a specific program requirement, then when change occurs, would the necessity to redesign occur? How does the idea of adaptability translate itself to the built interface? How

26 Michl.J., (1997), pt.37.
27 Ibid., pt.39.
28 "…Functionalism tried to communicate and aestheticise function rather than 'do' function…", Koch.D., (2014), p.182
29 Michl.J., (1997), pt.14.
30 Brand. S., How Buildings learn – 'Flow', (1997).

can buildings be designed to embrace change of use? These are some of the major questions pertaining to adaptability that will guide this inquiry.

Current day scenario

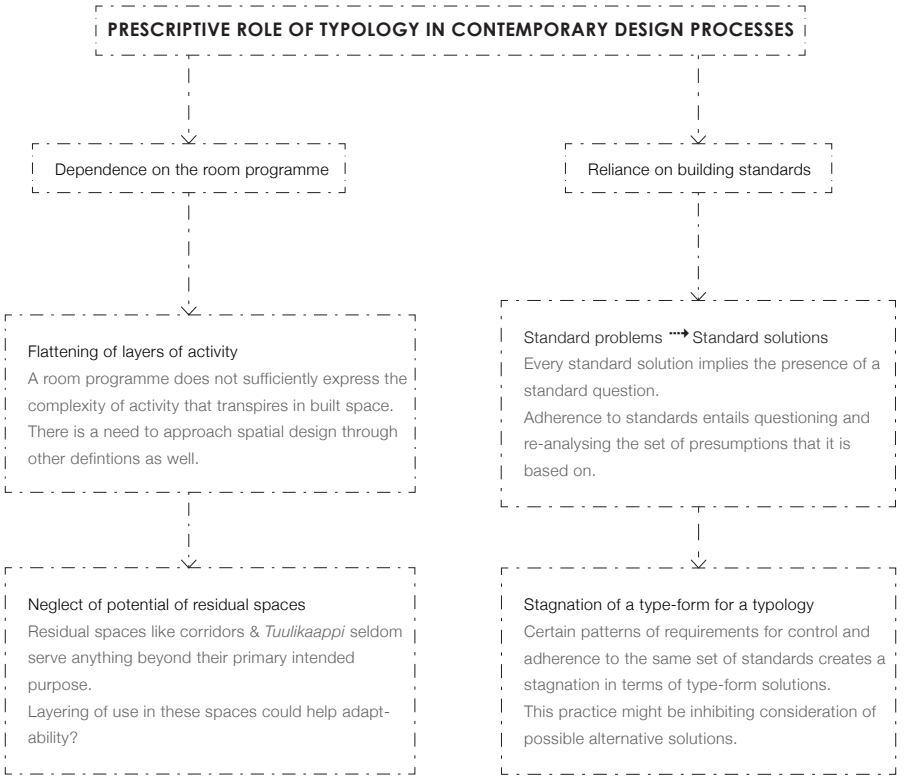
The idea that all new creation in art, design and architecture is based on some precedent has been established beyond question. It is more pertinent to the current discourse to question how and what lessons from the precedent are being propagated. The Italian publishing collective San Rocco brought up the question of typology in contemporary practice recently when they published their 'Book of Copies', which is a database of images categorised by strangely described typologies, compiled by architects around the world. They claimed that people could 'copy the images to produce architecture.'[31] Apart from the other deeper questions that this publication brings to the fore, it adds provocative commentary to the excessive reliance on typological definition for design. In an eponymous exhibition held in London, visitors could carry away photocopies of pages[32] from the book reiterating the weightage given to mere reference images and typology in the design process.

It has already been elaborated that the problems posed by this typological definition are strongly relevant to prescriptive realm. The following chapter examines in detail some facets that are most affected by this adherence to the typological definition in the design process.

31 'Book of Copies' - homepage, (2015)
32 "Book of Copies" – Exhibition at the AA, Blog review, (October 2013).

-I like the idea that outside terace is a deck above a water and that the marina is in the back ground! I still would like the feeling that space continue from inside to outside, all the floor could be for example (fake)grass as it is now. That would help also to maintain the feeling what Ihana Kahvila has now, which I think is important to maintain.

E-mail from client, dated 8 - 6 - 2015, in response to the 'Idea booklet' exchanged with some initial sketches of the project


PRESCRIPTIVE ROLE OF TYPOLOGY IN CONTEMPORARY DESIGN PROCESSES
Dependence on the room programme
Reliance on building standards
Flattening of layers of activity
A room programme does not sufficiently express the complexity of activity that transpires in built space.
There is a need to approach spatial design through other defintions as well.
Standard problems ⇢ Standard solutions
Every standard solution implies the presence of a standard question.
Adherence to standards entails questioning and re-analysing the set of presumptions that it is based on.
Neglect of potential of residual spaces
Residual spaces like corridors & *Tuulikaappi* seldom serve anything beyond their primary intended purpose.
Layering of use in these spaces could help adaptability?
Stagnation of a type-form for a typology
Certain patterns of requirements for control and adherence to the same set of standards creates a stagnation in terms of type-form solutions.
This practice might be inhibiting consideration of possible alternative solutions.

PROBLEMS OF THE PRESCRIPTIVE ROLE OF TYPOLOGY

This chapter briefly examines the problems of assigning a prescriptive role to the typological definition. Since the practice has been sustained for a considerable period of time, the repercussions can be more explicitly seen in retrospect. The prescriptive role of typology in contemporary design processes manifests itself as two major aspects – dependence on the room programme and reliance on building standards. Different facets of the shortcomings under these two categories are examined with supporting illustrations and examples. The limitations discussed here are not exhaustive but serve to highlight some of the most common restrictive consequences.

Dependence on the room programme

A room programme is a supporting document to an architectural brief. It is useful as a summary of the hierarchy of spaces and is an essential component that facilitates communication between various stakeholders. The fact that the room programme has prevailed as part of the architectural brief for such a long time gives ample proof of its indispensable nature. While the problems discussed here, highlight some of the restraints inherent to the design process driven by program[1] , it does not challenge its very existence.

Flattening of layers of activity

One of the most obvious shortcomings of the room programme is that it flattens the many-layered use of space into its primary intended function. Although it is supposed to be read in conjunction with other aims and goals elucidated in the brief, the tabulated presentation of data, very often supersedes other description of the design problem. While this aspect of the room programme does not seem to be a serious impediment in most cases, it can be seen more clearly in typologies, which are in need of re-definition. Let us consider the case of the library, which as a typology faces imminent threat as digital media slowly replaces the printed book. The necessity for the redefinition of the library typology implies that the functional program associated with it, as understood today, is fast becoming redundant. So

1 Program, in this thesis, refers to the room programme or functional programme, which is a summary of the spatial requirements of an architectural project tabulated by their function.

Main lobby and central public service spaces	**1150**	
Lobby functions	160	- draught lobby/ies - pram/pushchair parking facility, approx. 40 m² - lockers (50-100 pcs) - space reservation for a cloakroom (approx. 550 persons)
Public toilets	250	Distributed throughout the building; disabled WC (2 pcs per floor), babycare room 20 m²
Public services	170	- Reception and information point + control room, total 40 m² - Client service point + separate work space, total 40 m² - Client photocopying, print-out and scanning point, 20 m² - Self-service returns automat (connected to returns automat room) - "Book bar", approx. 20 m² - Reservations pick-up area, 50 m²
Meeting and lounge area	440	
Stage	30	Performance technology (sound and lighting)
Pop-up info spots (space reservation)	100	
Events spaces	**1570**	
Cinema	490	Incl. machine room, 40 m². Silent air-conditioning.
Multi-purpose hall	350	
Furniture and stage prop storage	150	
Lobby areas		Open foyers that can be separated off from the lobby areas - cinema foyer, 150 m² (incl. VIP area, 50 m²) - multi-purpose hall foyer, 125 m²
Back stage	40	Serves all performance spaces, lockers, separate kitchenette, 2 WCs + 2 showers
Living lab	200	Good AV + IT equipment
Library exhibition space	120	
Rentable exhibition space	180	
Exhibition spaces, local storage points	40	Approx. 20+20 m²
Spaces for external service providers	**840**	
Café	200	Incl. Kitchen 30 m² + staff social spaces, approx. 15 m², possibility for separate use
Restaurant	300	Incl. Cloakroom (unsupervised) and WCs, in total approx. 20 m²; kitchen approx. 90 m²; catering manager workspace plus staff social spaces approx. 25 m², possibility for separate use
Public sauna	240	Men's and women's separate changing and washrooms and sauna + lounge/cooling off area, possibility for separate use
Reservation for commercial premises (e.g. bookstore)	100	
The collections area and spaces linked to it	**2780**	
Library collections area	1600	
Fixed client-service point	140	Collections area, 1 per floor - client service point (2 staff + 2 clients) - separate work space, approx. 15 m² (work points for 2 persons) - local storage point, approx. 5 m²
Interactive spaces	240	Distributed through the collections area, 4 pcs à 60 m²
Lounges, "oases"	500	Distributed through the collections area and other parts of the building, 9-12 pcs, à approx. 50 m²
Quiet areas	300	3-6 pcs, e.g. à 90 m² and 30 places

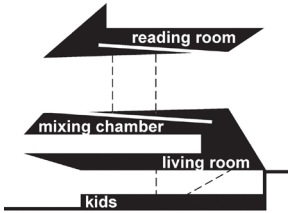
Learning and doing	**2040**	
"Childrens' World"	600	Incl. fixed client service point á 30 m² (see Collections area) and lightweight construction 'Children's World' performance space (performance technology)
Workrooms (for clients)	150	á 8-10 m², workpoints for 2 persons
Personal office area (for clients)	400	- work points, total approx. 350 m² - fixed client-service point á 30 m² (see: collections area) + laptop lending point - photocopying, print-out and scanning point, 20 m²
Music, recording and video studio	100	AV equipment, computers
TV and radio studio	60	TV studio lighting, sound-system
Digital-physical workshop, "fab lab"	100	
Listening, viewing and games room	230	
Teaching, group work and meeting spaces	400	10-14pcs à 16-60 m², the larger spaces are combinable, one 60 m² project space, one communal kitchen
Staff facilities	**430**	
Office facilities	300	- pigeon holes + staff personal storage cart "parking area" approx. 35 m² - meeting rooms, 3 x 12-20 m² + 1 pc á 45 m². - 4 workrooms á approx. 10 m² - open workpoints for 15 persons, inbetween them a 'team area', in total 120 m² - quiet space, 2 x approx. 7 m²
Staff lounge	50	Easily accessible to all staff
Changing and washrooms	50	Separately for mean and women, ratio approx. 1:1
WCs	30	Approx. 1 WC á 3 m² / per floor; additionally in connection with the office facilties 3 WCs, 1 of which is an disabled WC
Library logistics and library material handling facilities	**480**	
Library collections storage	200	Partly mobile shelving, can be situated in the basement
Returns automat room	80	Connected to the selfservice return automat and 'book bar' in the main lobby, and further to the library material handling facilities
Library material handling	200	Connected to the returns automat room as well as the service and loading area
Service spaces	**710**	
IT and other equipment areas	60	On different floors
Building management monitoring and server room	50	Approx. 10 servers, control room, can be placed in the basemen-
Cleaning facilities	80	Cleaning centre (can be situtaed in the basement, near a lift) á 50 m², as well as cleaning cupboards, approx. 10 pcs á 3 m², distributed through the building
Refuse store	60	Connected to the service and loading area
Building maintenance store	40	Also an external connection, can be located in the basement
Service and loading area	400	Access for a delivery van, free height of at least 4,5 m.
Distribution substation	20	Preferably on ground level, with door directly out
Civil defence shelter		Situated in connection with the excavated underground parking area
Technical spaces		Approx. 7 % gross floor area, of which the spatial requirement for the AC machine room is approx. 1000 m², not included in the room programme area
Space reservations required for the City Centre Tunnel		Shafts 2 pcs á 20 m² (extract and fresh-air intake) and reservation for a stair connection, not included in the room programme area
Programme floor area in total (m²)	**10 000**	

F Room programme of the Helsinki City Library Competition - Flattening of layers of activity
The library intends to be a public civic centre. Yet, the only arbitrarily defined non-commercial communing space in the program is less than 10% of the total built-up.

there is a need to redefine the program either to suit other public activities that cater to the current day society or create arbitrary public spaces which could serve many purposes as and when the need arises.

In the design of the Seattle Public Library by OMA (2004), the library is interpreted as a public knowledge house centred on all forms of media. The simultaneity of many forms of media is offered as the justification to substantiate its creation. There are some attempts to loosen the strictly functional definition of spaces by the introduction of spaces like the 'mixing chamber' 'meeting platform' etc.[2] However, the design process still adheres to the prevalent practice of grouping spaces into programmatic clusters and tries to solve the form by tailoring spaces to these programmatic needs.

The brief of the Helsinki Central library competition (2012-2013) is a clearer example of how the flattening of layers happens. The brief urges participants to envision the proposed library as a new civic centre at the heart of the metropolis where knowledge, skills and stories meet. There is a certain emphasis placed on physical encounters and the re-interpretation of the library as a common public living/work room.[3] The series of ideas that are discussed as part of the textual brief, however, fail to translate into the room programme. The table contains a list of spaces as are expected to be required immediately after the opening of the library; each requirement clearly defined by its intended function. Temporal activities like

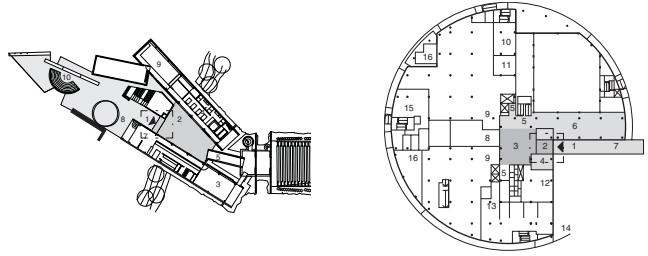


G Seattle Public Library (OMA, 2004)
Some attempts at loosening the typological definition of the library and hence re-defining it.

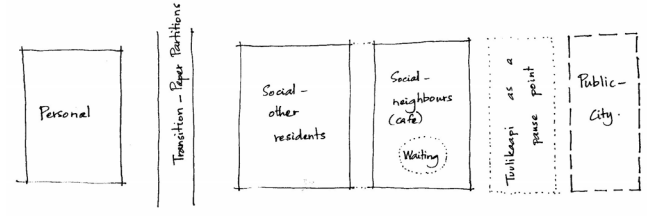
2 Seattle public library, Archdaily
3 The heart of the Metropolis, p.24.

pop-ups are addressed as space reservations. What these spaces will accommodate during other times is left to the discretion of the designer, which still opens up possibilities. Nevertheless, the idea of clearly defining major functional spaces and loosely defining such interstitial spaces which have a lot of potential presents the danger of them being overlooked. All spaces related to 'physical encounters'[4] are presented as lobbies or oases, which are, described as spaces leading to/from some other functional space. If every space is defined by its function, as understood today, then how can one address the library's readiness to accommodate 'new forms of media that we cannot grasp today'?[5]

The idea of defining spaces solely by their function might not help address certain complex layers that spatial design demands. There is a need to then consider other approaches to defining spaces. Would the design possibilities increase when spaces are defined as a series of situations or experiences? [6]



H Illustrative examples of *Tuulikaappi* (wind blocking chamber) from RT 91-10788. The space does not go beyond its primary intended function.



I 'My Home' project - Residual spaces re-interpreted as Threshold spaces

4 Ibid.,
5 "In the design there is a readiness also for the future – for new forms of media which we cannot even grasp today", The heart of the Metropolis, p.27.

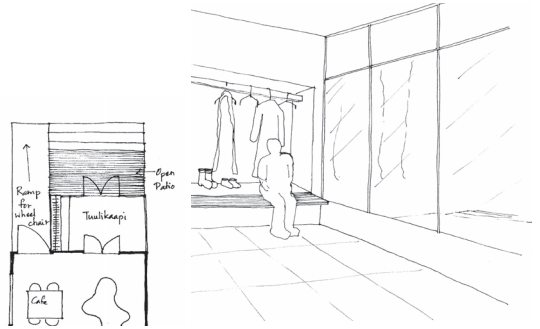
6 "One can imagine the library of the future as a 'reading palace'....", Verschaffel.B., (2010), p. 93.

Neglect of potential of residual spaces

Residual spaces like corridors are the most affected by the practice of defining a space by just its function. These circulatory and similar service spaces that are integral to the working of a building have the potential to enrich user experience by being very receptive to many layers of activity. However, due to this strict adherence to a functional programme they seldom transcend their originally intended purpose. While the potential of residual spaces in the urban scale is very actively discussed in current discourse, the potential of residual spaces inside buildings is rarely addressed.

One such residual space is the *tuulikaappi* or the wind blocking chamber present at all public entrances to buildings in the northern climates. While this is an integral element to ensure thermal comfort it is also a residual space, which very often does not serve any other purpose.[7] Nevertheless, it possesses a lot of potential, in terms of easing the transition between the outside and the inside and serving as an introductory space to the contents of the main area.

The potential of these residual spaces in terms of transition are explored in 'The Threshold' design idea made for the 'My Home' project.[8] The design studio course, which I participated in, aimed at creating conceptual design solutions that would facilitate a shared living space for a specific group of intellectually disabled young people. The group of people who would be sharing the space have a variety of daytime



Tuulikaappi as pause point

J Corridor as transition space

7 See plate H.
8 Project Module MUO-E0005 (Fall 2014), Department of Design, Aalto University School of Arts, Design and Architecture, Tutors – Isoniemi.L., Pirinen.A., & Soini.K., 'Threshold' design concept by Youn.B.M. & the author

activities that they engage in. Their biggest difficulty in inhabiting a shared space arose at the points of transition – from personal to the shared communal to public, since it was at these moments that their social sense underwent fast recalibration to tackle the new change of circumstance. Addressing this change of scale of space by slowing down the transition and allowing a pause space eased their sense of social well-being. The concept proposed the introduction of the corridor as a transition space between their personal bedrooms and the shared living room. The connection between the corridor and the common space is defined by sliding doors with a translucent paper membrane infill, styled similar to the Japanese sliding doors. The translucency enabled the users to gauge the activity level in the common area before actually entering it. This system also affords them the possibility to choose to stay in the personal space, if they so desired. By giving them the desired level of privacy and space for decision-making, the corridor here performs more than its prime agenda of being a circulatory space. Similarly the tuulikaappi in the same project serves as a waiting area easing the transition from the community to the bigger public space of the city.

There are also examples of a similarly layered use of residual space in public buildings. The exhibition space in the A-wing of the Main Building of Aalto University School of Technology at Otaniemi is actually a corridor transformed to accommodate new activity. Change of proportion of a linear circulatory space and addition of smaller alcoves opens up possibilities of providing space for small work groups, exhibiting artwork etc. Similarly, the addition of diagonally placed workstations to the second floor corridor of the Aalto University School of Economics allows multiple uses in the space without obstructing movement. These examples are

Aalto University, School of Technology

Aalto University, School of Economics

K Layered use of corridor space

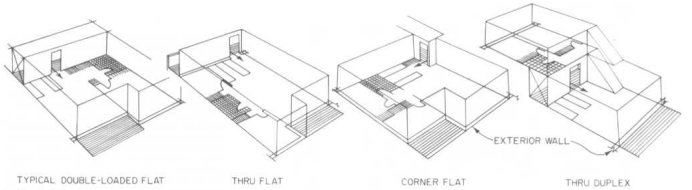
specifically reminiscient of the 'Short Passages' pattern mentioned in the book, *A Pattern Language*.[9]

If such layering of activity could be addressed at the design phase of every building, would that ease change of use in the future?

Reliance on building standards

The advent of Industrialisation and fast manufacture enabled the production of the prototype and subsequently triggered the idea of standardising solutions.[10] Standard solutions, in the specific case of prescriptive role of typology, pervaded architectural practice in the form of compiled architectural standards and solutions like Time Saver Standards, Neufert's Architects' Data, the Finnish RT cards, etc. They are intended to be guidelines that establish a certain benchmark for every designed solution. These volumes, which are a comprehensive collection of guiding data, also provide the user with some typical solutions.[11] These solutions especially helped fast production of mass housing and are still reflected in the standardised housing solutions of today. While they seemed efficient and fast solutions in the context of the post-war era where rebuilding was extensive and the need for quick solutions was pressing, abiding by similarly standardised solutions today, makes sense in terms of manufacture only. In terms of design solutions, its pertinence is questionable.

9 The relevance of these patterns are discussed in detail, later, in the thesis.
10 Moneo.R., (1978), p.33.
11 See plate I.



L Typical apartment solutions

Standard problems ⇢ Standard solutions

Every standard solution already implies the presence of a standard question. The standard question is formed on the basis of a set of presumptions, which may have been most relevant at the time of framing. Using a standard solution that was formed in response to an erstwhile standard question, to address a current standing question is not sensible. This can be illustrated with the example of the concept of the kitchen work triangle. This concept was developed in the 1940s to determine the work efficiency of the kitchen and is still used by kitchen module manufacturers.[12] It is based on the premise that the primary task points in the kitchen are the stove, dish wash and refrigerator. They are the three points of the triangle and certain guidelines are laid that they are in close proximity to each other and movement between them is not obstructed while allowing adequate space for food preparation and other activities.[13]

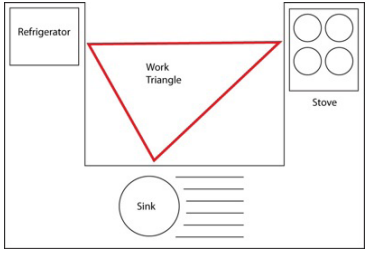
The kitchen work triangle is based on time motion studies for a single cook kitchen made at the turn of the twentieth century when it was typical that the housewife handled all the kitchen chores.[14] Today, both men and women are active users of the kitchen space. Some new kitchen appliances like the microwave oven have become part of the modern kitchen, which raise the question of reframing the triangle to make a quadrilateral or polygon. Though attempts have been made in that direction,

	Case 1 *Student dorm kitchen* *Helsinki, Finland* *4 single users*	Case 2 *Private house kitchen* *Thoothukudi, India* *Family of four*	Case 3 *Private flat* *Helsinki, Finland* *2 roommates*
Adherent to the kitchen work triangle	No	No	No
Reason for non conformance	Single wall kitchen, other guidelines apply. However, Sink's clear counter space < 61cm. Clear counter space with respect to the three points is restricted. Prompts the use of the dining table as preparatory area.	Leg > 2.7m Wall in between two points	Leg <1.2m

12 Kohler (US) use 'kitchen work triangle model' to determine efficiency of their layouts. See link in reference.
13 See appendix 1 for detailed guidelines, p.96.
14 Kitchen Work Triangle – Kitchen zones, Wikipedia.

Case 1 Case 2 Case 3

M *Graphic Exercise*: Kitchen work triangle *Scale: 1:200*



M (a) A 'Kitchen work triangle' compliant kitchen

no consensus has been reached.[15]
The accompanying graphic exercise adopts examples of three real-life kitchens (from personal experience) and examines their efficiency with the kitchen work triangle model.

The three chosen kitchens do not conform to the kitchen work triangle model due to different reasons. The prime indicator of efficiency in this model is the number of steps between the primary points. In an attempt to understand efficiency, as defined by this model, they are further examined with simple movement diagrams traced by a cook in the process of making French crepes. The lighter movement lines trace the preparatory leg of the process and the darker lines indicate the latter stove work following the refrigeration of the batter and the serving leg of the process. Case 1 & 3 present a presumed scenario where only one of the multiple users are currently using the kitchen and dining space. The process and the ingredients are the same in all the kitchens. However, it can be seen that the lines are denser in the last two cases. Case 3 is a smaller kitchen and since the movement lines overlap each other fairly often density ensues. On closer examination of Case 2, it can be seen that the lines are more intense in the latter serving leg of the process. Since the users in this case are a family of four, it can be understood that there are multiple trips to the dining area. This exercise of comparing the two sets of graphics illuminates the pre-conditions for efficiency as assumed in the kitchen triangle model, which might not ring true to the examples at hand, situated in contemporary times.

15 Ibid.,

- *The refrigerator is the main source of food.*

All movement diagrams show at least as many trips to the larder/dry storage as to the refrigerator. In Case 2, the refrigerator is located away from the kitchen in the dining area. It is still an effective placing of the appliance given that in the context in which it operates, the larder tends to be the primary source of food ingredients. This leads to the already pertinent question of what the important points in the kitchen are. These points would also differ hugely based on the kind of cooking carried out. For example, a student who prefers a less laborious cooking process might opt to use the microwave more often than the stovetop. Hence, the idea of universally presuming three important points in the kitchen is debatable.

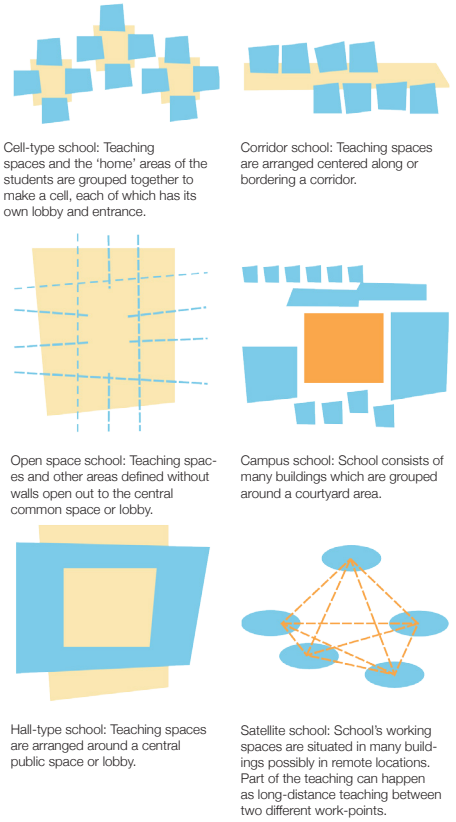
- *Efficiency is measured by the number of steps between the points*

The parameters used to determine 'efficiency' may not be limited to the proximity conditions of the main interfaces especially in residential layouts where other factors like availability of space for two cooks, ability to expand etc. might also be relevant. Consider the case of the kitchen in a one-room apartment initially inhabited by a single person and then accommodates a couple who then make a family. The ability of the kitchen to meet the needs of the growing family, here, might be a more pertinent facet of an efficient kitchen in the contemporary context where affordability of new real estate is a bigger problem. Also, in most cases, the scale of location of a residential kitchen already ensures the proximity of important interfaces.

The 'Kitchen work triangle' model and other standards developed around that point of time were based on ergonomics that were guided by Taylorist principles,[16] which emphasise on efficiency of work. This approach was criticised later by researchers who argued that the well being of the worker should be the focus of ergonomics.[17] Well-being, in the contemporary sense, encompasses social, economic, psychological, spiritual or medical aspects,[18] which were not the factors that were considered in the making of these standards.

The idea of adhering to a certain set of standard solutions entails the questioning and re-analysing of the set of presumptions that created the standard question.

16 Kitchen Work Triangle – History, Wikipedia.
17 Human factors and ergonomics - In industrial societies, Wikipedia.
18 Well-being, Wikipedia.



N Basic solutions of the school typology. Image 7 from RT 96-10939.

Stagnation of type-form for a typology

The room programme is a very factual tabulation of functional spaces constituting a functional typology. Their organisation in space is dependent on a number of other factors such as the need for proximity, easy connection/isolation etc. In their paper, *'What do we mean by building function?'* Hillier, Hanson & Peponis[19] categorise all users of a building as inhabitants or visitors and define the making of a building as the creation of the interfaces between the inhabitants and visitors and between different categories of inhabitants. Thus, some set relations of integration and control regulate every building form.

These interfaces of regulation and control are more pronounced in some building typologies like the school. As a result, a limited number of patterns of spatial organisation arise.[20] Very often, certain specific spatial organisation patterns or formal solutions become associated with certain typologies.[21] Although, there is a logical reason for this association, repetitive solutions following the same formal patterns might be causing some stagnation in design processes.

The following graphical exercise illustrates in more detail one such prevalent type-

19 Hanson.J., Hillier.B., Peponis.J., 1984, p.66.
20 See plate N
21 "-appropriation of the basilica by the church and the atrium by the office building-...", Braham.W., (2000), p.1.

form[22] associated with the Finnish public school typology. The graphic[23] shows the figure ground diagrams of shortlisted entries to three public school competitions in Finland – Kirkkojärvi (2006), Saunalahti (2008), Opinmäki (2012). The diagrams are intentionally shorn off the context and site conditions, since the focus of this exercise is on spatial organisation patterns. The different hues of grey signify differences in the roof heights. It can be seen that most of the diagrams of the entries revolve around variations of a single type-form - the star-type school, as it is popularly referred to. It cannot be a coincidence that the same type-form is adopted by such a variety of entries transcending spatial requirements and site constraints. This curious association of a star shaped type-form to the typology of a school warrants scrutiny.

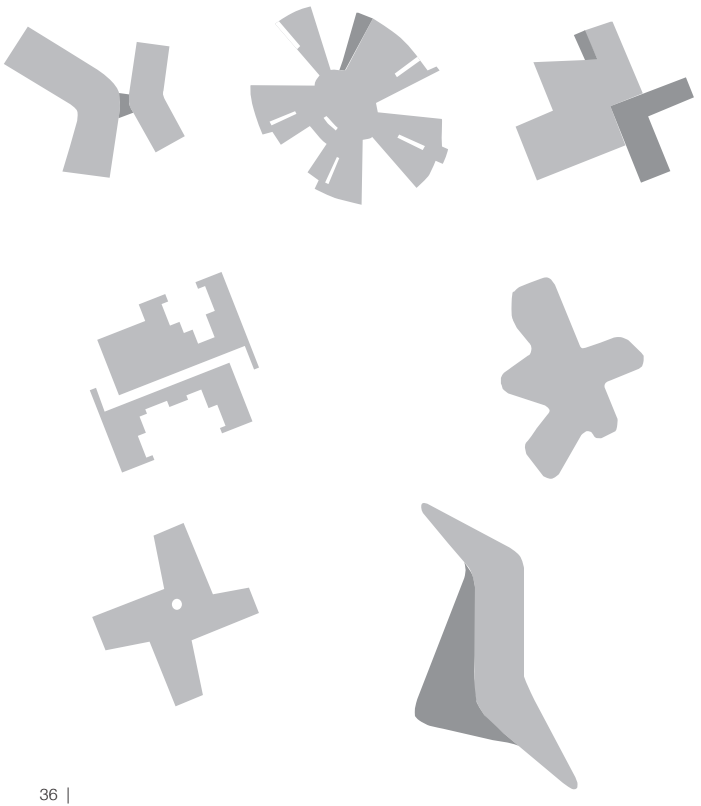
On close examination of the prize-winning entries, it can be seen that the central spatial idea at the heart of the star, is strikingly similar in the three cases. The two or three storey high nodal space, which is situated at the confluence of several vertical and horizontal circulation corridors, seems to accommodate the dining hall and the stage/performance area.[24] Such a specific pattern of repetition implies the existence of some stipulated pre-conditions.

On cross-examination with the RT catalogue,[25] it can be observed from the zoning diagram that the central area (sydänalue) of the school is the only zone that is specifically defined. The other zones are more arbitrarily placed. It can be inferred that the specific delineation of this central space combined with the prerequisite set of regulations and control necessary for the working of the school already lead to the creation of a set type-form for a typology. *While this type-form might be adept at addressing several requirements of the current educational system appropriately, adoption of a single pattern of solutions might be inhibiting the consideration of possible alternatives.* The school typology is adopted as an example here to study these patterns. Similar patterns exist in the case of other typologies too.

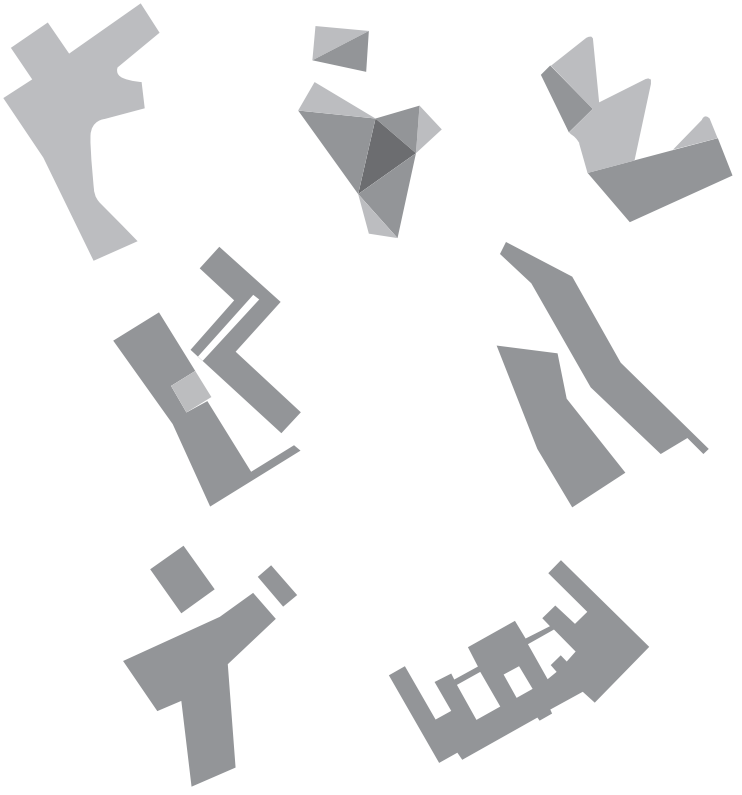
It is possible that this system could lead to newer typological evolutions. This exercise intends to bring attention to the fact that these type-solutions exist. Understanding the reason behind their existence could provide justification for their adoption or lead to a re-questioning of their relevance. *In light of the central question of this thesis, this strong association might be seriously inhibiting the adaptability of a building.*

22 Type-form, here refers to the sustained association of a particular formal spatial organisation pattern to a specific typology.
23 See plate O
24 See Plate P.
25 Finnish Building Standards, RT 96-10939, Koulurakennus & Tilasuunnittelu, (October 2008), plate Q

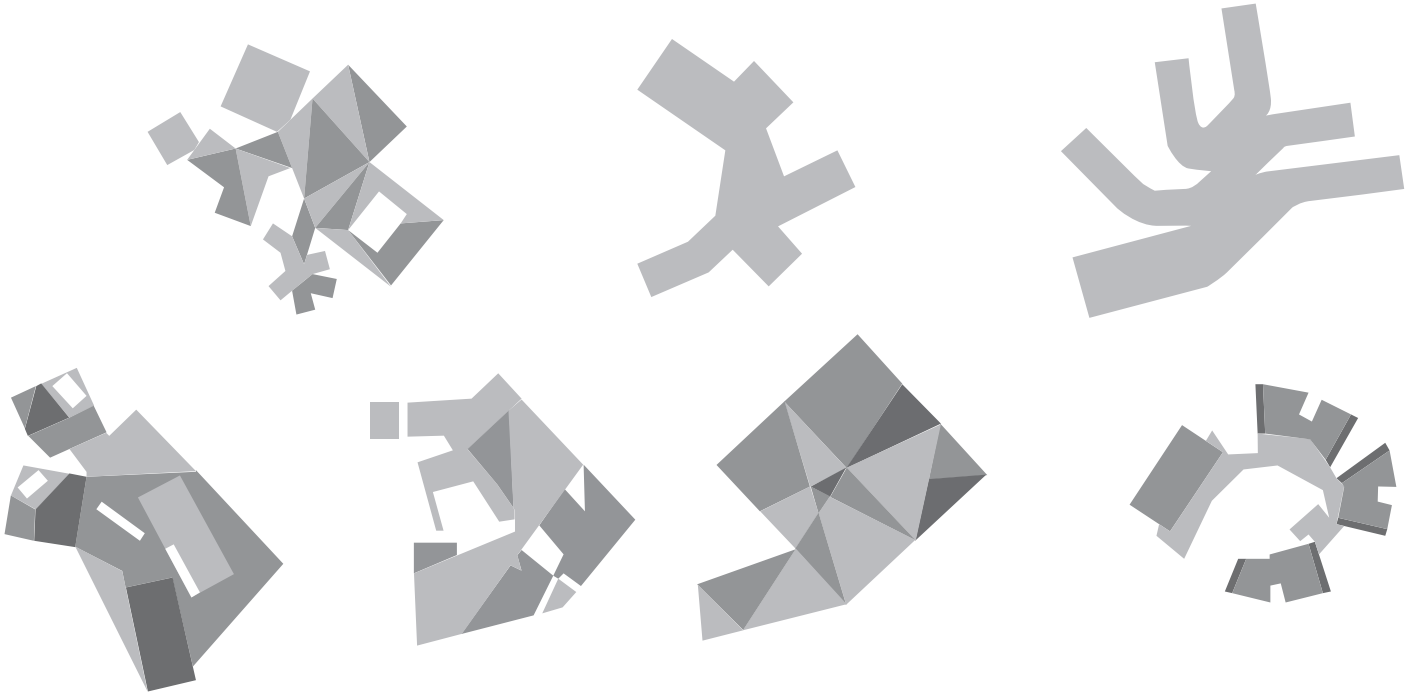
Kirkkojärvi (2006)



Saunalahti (2008)

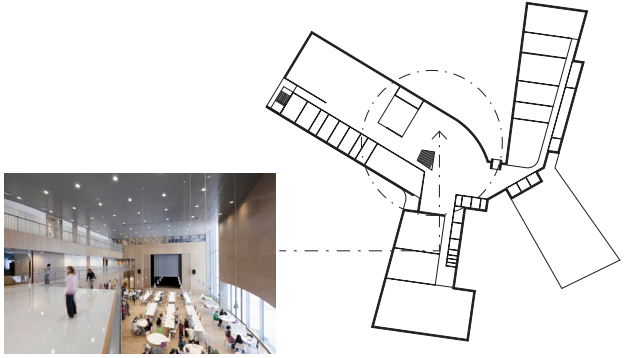


Opinmäki (2012)



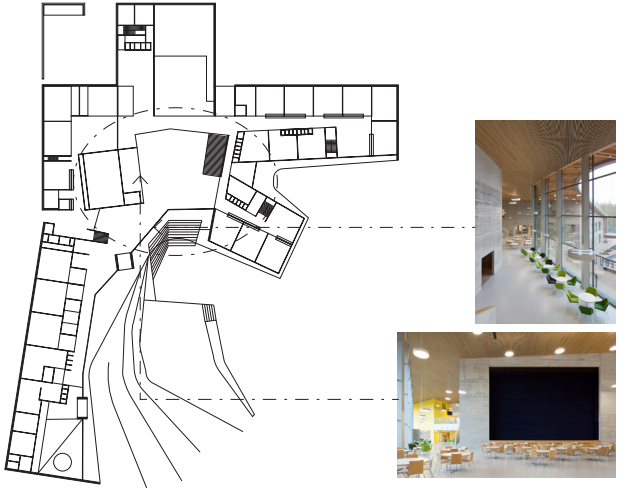
O Figure ground diagrams of shortlisted entries to three public school competitions in Finland *Scale 1:4000*
The diagrams are intentionally shorn of the context to focus on the type-form.

P Prize winning schemes of the three competitions - Striking similarity in the spatial quality of the central area. The two or three storey high central space, which is situated at the confluence of several vertical and horizontal circulation corridors, accommodates the dining hall and the stage/ performance area.



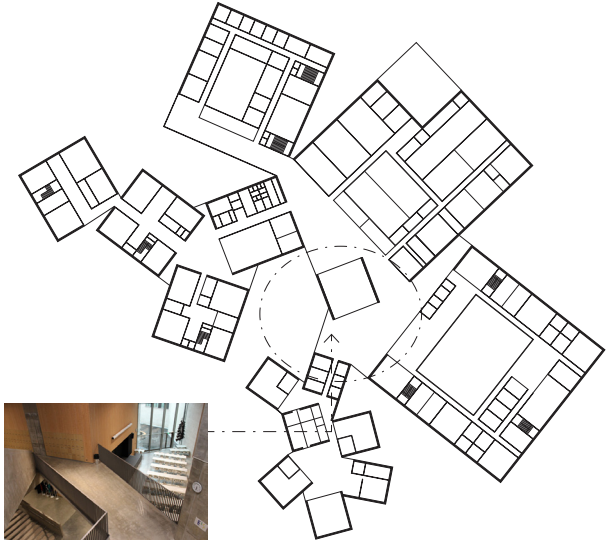
Kirkkojärvi (2006), 1 floor
Total built-up area: 10,150m^2 Scale: 1:2000

This school is proposed to work like a small lively city. Although the other supporting spaces of the school are organised around the corridor, the central space follows a slightly different pattern.



Saunalahti (2008), 1 floor
Total built-up area: 10,500 m^2 Scale: 1:2000

The school follows the cell-type organisation for the classroom areas and the other facilities are connected by corridors. This building includes other communal facilities like the youth library too. The central space, here again, shows a similar spatial quality.



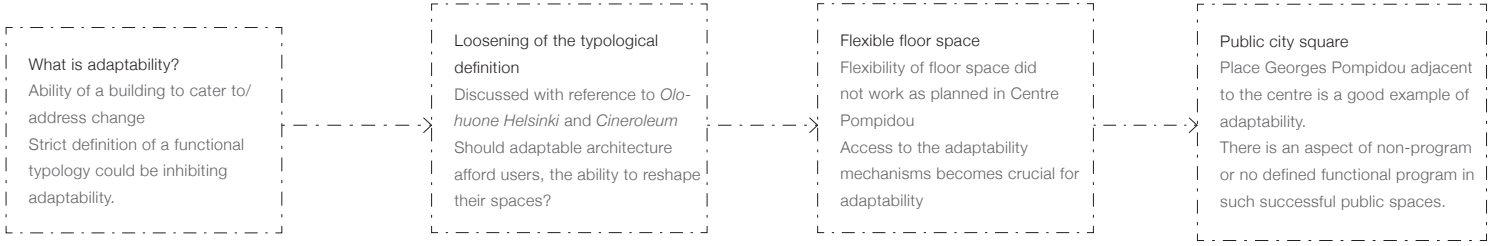
Opinmäki (2012), 1 floor
Total built-up area: 16,380 m² Scale: 1:2000

The spatial organisation in this school shows a curious synthesis of the cell-type, hall-type and corridor-type discussed earlier. However, the central space is still strikingly similar to the previous prize-winning entries.

Q Diagram of School's working spaces, Image 1 from RT 96-10939.

-I would rather make different spaces with e.g. plants that walls. And also with just different seating solutions; hammocks, double-& singleswings, fat boys and so on. Of course there has to be "normal"

E-mail from client, dated 8 - 6 - 2015, in response to the 'Idea booklet' exchanged with some initial sketches of the project


What is adaptability?
Ability of a building to cater to/ address change
Strict definition of a functional typology could be inhibiting adaptability.
Loosening of the typological definition
Discussed with reference to *Olohuone Helsinki* and *Cineroleum*
Should adaptable architecture afford users, the ability to reshape their spaces?
Flexible floor space
Flexibility of floor space did not work as planned in Centre Pompidou
Access to the adaptability mechanisms becomes crucial for adaptability
Public city square
Place Georges Pompidou adjacent to the centre is a good example of adaptability.
There is an aspect of non-program or no defined functional program in such successful public spaces.

ADAPTABILITY

This chapter attempts to contextualise the previously elucidated problems of a functional programme. Contextualising the problem establishes the scope of addressing it and sets the stage for the construction of a solution.

What is adaptability?

Adaptability of a building, at its most basic definition, is its ability to cater to, address and/or facilitate change. Buildings are usually designed with the intention of long-term use. Inability of a building to adapt, results in demolition, which is neither sustainable nor economically sensible. Changes that could impact architecture are many-layered, complex and are not limited to change of use. Change could be effected by change of technological infrastructure, changes in socio-political structures, change in the primary function of the building, change in the primary function of the surrounding environment, change of function in terms of scale, like growth of a business concern etc. The terms by which change is described greatly impact the understanding of adaptability in a building. This thesis focuses on addressing adaptability issues in terms of change of use in the built environment.

Fairly often, spatial design arises from the definition of a need stated in terms of a typology and in this manner; the typological program prescribes the design solution. It could already be inferred from the previous exercise that loosening the typological definition could aid addressing the idea of adaptability in the design process.[1] This loosening of the program creates the possibility of an unbiased approach to space as potential for human activity without being bound by the definition of a functional typology. This aspect can be elucidated by Juha Ilonen's *Olohuone Helsinki* [2] (Living room Helsinki) project, which, with the aim of activating urban street life identifies

1 "Consequently, if the plan did not emerge as a response to 'functional' needs, neither would it have to change if there was a change in use.", Koch.D., 2014, p.182.
2 Ilonen.J., Olohuone Helsinki, 2007, webpage.

R 'Olohuone Helsinki' project suggests revitalisation solutions for unused pockets of urban space by interpreting them as 'living room' to the city.

31 unused but high-potential pockets of space in and around the city centre. The spaces identified include open squares, small parks, pedestrian paths, alleys etc. For most part, the suggestions for activation are centred on freeing up potential space to versatile use by suggesting the moving away of deadening activities like parking etc. Alternative parking lots in the vicinity or other traffic routes are suggested. Some of the possibilities to revitalise the space do adhere to the typological definition like cafes, restaurant terraces etc. Loosening the typological definition is not the aim of this project. But by referring to a multitude of activities as the 'living room' to the city, it does point in that direction and yet its use of typology as a solution illuminates how the typological definition is important in the descriptive sense of the word.

Some works of the London-based collective Assemble, highlight the interplay of the descriptive and prescriptive roles of the typological definition in architectural design. Their adaptive reuse project, Cineroleum (2010) depicts a curious synthesis of two starkly different functional typologies – the petroleum and the cinema. In re-adapting the unused petrol station into the cinema, the designers used mainly cheap industrial and reclaimed building material and the labour of volunteers.[3] The idea of re-adapting an unused space to give it a certain defined typological use, acts within the container of the typological definition. In fact, the descriptive aspect of the typological definition that helps the user acquaint himself/herself to the built interface has been harnessed very well by references to the iconography of the cinema typology. Yet, the strong prescriptive aspect of the typological definition in the design process is weakened, partly by the context where the separation from the ad-

3 The Cineroleum, Assemble, webpage.

jacent busy lane is ephemeral and partly, by the way, the design is approached with the intention of creating a user interface as a physical infill to derelict space rather than a sequential stringing of spaces to suit a typological definition. In a parallel trajectory of thought, *should adaptable architecture afford users, the ability to reshape the space and the user interface within reasonable boundaries of change of use?*

The design of Centre Pompidou (1977) in Paris addressed flexibility by offering huge floor spaces where walls could be easily reconfigured to suit the various changing activities in the museum. Change and its omnipresence were major design drivers in this scheme.[4] The idea of shifting all the service lines to the exterior of the building was a huge gesture towards freeing the interior space. While this gives huge flexibility in exhibitions and the temporary spaces, the permanent collections in the museum have also undergone unprecedented growth and people traffic has been way more than expected[5] resulting in a very different usage than was initially planned. The flexibility afforded to the interior spaces by huge empty floor slabs could not be completely harnessed, as the costs of reconfiguring these huge spaces did not fit the needs, resulting in huge unused empty volumes. This space was re-designed in the later renovation to suit the use as was defined post-occupation.[6]

Post-occupational changes in every architectural project are very valuable feedback about actual 'use' in architecture. Very often, users come up with frugal innovative solutions to cope with change. Merely designing systems of flexibility of use does

S 'Cineroleum' by the collective *Assemble* - an unused petroleum is given new use as a cinema.

4 "The Pompidou captured the revolutionary spirit of 1968" – Richard Rogers, Dezeen, 2013,
5 Centre Pompidou, Official media website.
6 Pompidou Centre set for 2-year renovation, The New York Times, April 7 1994,

01/01/2006

15/10/2012

07/08/2014

T Place Georges Pompidou - Visitor photographs

not create adaptable spaces. The Centre Pompidou is an institutional typology and the authority to decide how and in what way the flexible space is shaped at any given point of time stays with the library authorities and curators. In that manner, the flexibility is still controlled. *Accessibility to the flexibility mechanism also becomes crucial to the idea of adaptability. It is essential to enable users to reshape their spaces.*[7] Providing this opportunity and making the designed mechanisms perceivable create proactive users who help complete the process of adapting.

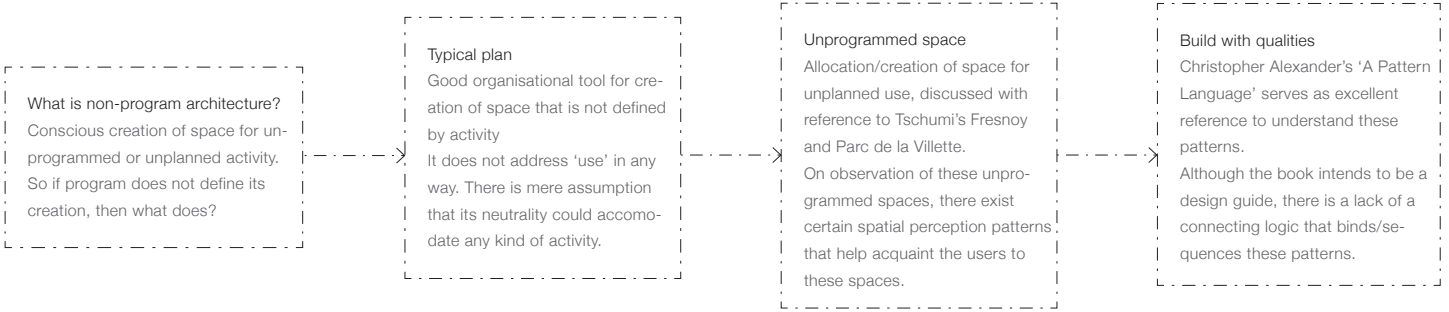
Consider the case of the Place Georges Pompidou, the open square adjacent to the Centre Pompidou, which is an active socio-urban space that more effectively communicates the idea of adaptability to the users of the space.[8] The set of photographs made by users at different points of time in the year and spaced over a few years stand testimony to how the space serves as a convenient platform to suit various scales of activity.[9] Should all built space be use-neutral platforms to be truly adaptable? The idea of adaptability, with regard to change in use, encompasses a number of layers. *In most successful examples of adaptable spaces, there is an element of non-program.*[10] It becomes crucial to analyse this element in more detail in order to arrive at a better understanding of adaptability.

7 Brand. S., How Buildings learn – 'The Low Road', Part 2, BBC TV series, (1997).
8 Centre Georges Pompidou, Place Georges Pompidou, Wikipedia, last edit 20/03/2016.
9 See Plate R
10 Non-program, in this thesis, refers to the creation of space/architecture governed by other factors exclusive of function or its intended purpose.

So some kind of playground that doesn't

look traditional playground would be necessary.

E-mail from client, dated 8 - 6 - 2015, in response to the 'Idea booklet' exchanged with some initial sketches of the project



NON-PROGRAM ARCHITECTURE

This chapter is an inquiry into the idea of non-program architecture, in an attempt to position the heretofore-discussed ideas of layered use and anticipation. The theories/body of thought discussed, do not necessarily have 'non-program' as their objective, but provide alternate insights to approaching function/non-function in the design process. The inferences observed with reference to each theory help build onto the conclusion.

What is non-program?

Program in architecture, in this thesis, refers to creation of space with the intent of defining it to suit a specific intended function. As a corollary, non-program architecture refers to the creation of architectural space without defining it through function. This element of non-program, as was mentioned earlier, is evident in the case of public places like city squares. *Is there an immediate parallel to the city square inside built space?*

In his photographic series, Time In-between,[1] photographer Herfort.F., captures staged everyday scenes in Russia, where people are frozen in the act of waiting. The relationship of these people to the space around them creates very surreal situations indicating the ambiguity of the functional definition of the space.[2] This aspect of spatial dubiousness, while exaggeratedly expressed in the photographic series, also reflects on the actual many-layered use reality. *If function does not define the creation of such spaces, what are the other factors that help define such spaces?*

U 'Time In between' - Photographic series reflecting on Ambiguity of space

1 Herfort.F., Time In between, Photographic series, webpage.
2 "In Western Europe everything is so neatly defined, so specific. A waiting room is a waiting room; an office is an office. In Russia, in contrast, rooms are open to interpretation, many-layered and not so prettified. And I also noticed that there seem to be many more people just sitting around in them. None of them seems at first sight, to know what they are doing there. I tried to integrate people like that into my pictures.", - Photographer Herfort.F.,

V Sir John Soane's lecture drawing of the primitive hut.

W Typical plan as organisational tool for workshops/ industries
Workplace, Studio Mumbai Architects

Typical plan

The 'typical plan' as a term, usually refers to one of the many floor plans that are repeated without modification in a many storeyed building like a skyscraper.[3] Very often associated with the typology of the office building, it is the classic manifestation of the 'building as a machine', where architecture merely becomes a background to activity. The only strongly defined parts of the building are the vertical circulation cores and other services that ensure the smooth functioning of the 'machine' making the habitable space, functionally neutral. As has been discussed earlier, with the example of the floor plates of Centre Pompidou, typicality and neutrality of space only opens up the possibility of adaptability and does not necessarily create an adaptable interface. The typical plan, as is given form in office buildings, is an indifferent platform for activity and not a comfortable space for human habitation.[4]

The essence of the typical plan, as a formal structure and idea, however, could be elaborated as a primitive defining of a boundary and organisation of space that is not defined by an activity but rather anticipates it. Sir John Soane's illustration of the primitive hut expresses this facet very well.[5] This lack of specificity of activity definition affords it an ability to absorb many layers of use. The idea of the repeating frame that constitutes form provides users an easy interface to adapt to and later reshape as and when needed. As a tool for organisation of space, the typical plan is easy to grasp and facilitates expansion. It could be a good instrument for solving

3 Marullo.F., San Rocco 7: Indifference, p.58.
4 Koolhaas.R., & Mau.B., 1998, p.338.
5 See Plate V.

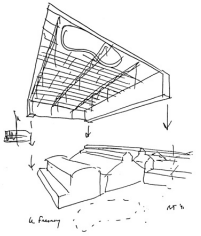
form in spaces that house temporal large-scale activities like workshops or industries.[6]

Arguably, the success of using the typical plan as a tool for creation of non-program space is inevitably dependent on its scale. For example, a 3x3 m grid offers much less possibilities of adaptation than a 6x6 one. Large span spaces could possibly be more adaptable and also paradoxically uncomfortable for activities that require a more intimate scale of space. Also, the relevance of the typical plan as a design instrument in the context of non-program is peculiar as, in its indifference to the activity contained, it does not address 'use' in any way. If program, overvalues utility and tailors spaces to specific needs, the typical plan completely oversees it. *Does overriding the address of use in the design process provide the key to an adaptable solution? If 'use' is not addressed, does the adoption of an organisational tool like typical plan suffice adaptability?*

Unprogrammed space

Unprogrammed spaces occur even in strictly functional program driven design processes when spatial organisation requisites create unplanned surplus pockets of space. This discussion, specifically, refers to the conscious creation of space for unplanned activities either as part of a program driven design or as an architectural concept for the whole built space. In program, a function helps define form. *So when the function is unplanned or unforeseen, what factors help define form?*

6 See Plate W.



X Unprogrammed space as incogruous volume between new roof and programmed volumes below, Le Fresnoy Art Centre, Tourcoing.

Y Use of follies - Visitor photographs

In the Le Fresnoy Art Centre, Tourcoing, (1991-1997), Tschumi designs an incongruous space between the functionally programmed existing building volumes and a 'large ultra-technological roof'[7] as an in-between space where unprogrammed events might occur.[8] It is a centre for cross-over artists and the occupation/use of this space is evident in that context. But does its spatial quality intentionally promote 'unplanned use'? [9]

In his well-acclaimed, *Parc de la Villette (1982-1998)*, he attempts to deconstruct assumptions regarding architectural systems. He approaches the design of the 135-acre park in three layers – surfaces, lines and points; that superimpose on each other to collide and distort any cohesive meaning that could be attributed to the systems. The 'points' are given shape as 'follies', which are 35 transformed versions of architecturally articulated red cubes, placed in a grid pattern 120 metres from each other with the primary intention of giving a sense of orientation to the visitor. Each folly is unique and a program does not direct the transformation of the cube. It is a space to harbour activity and 'use' is completely shaped by the visitors.[10] This attribution of non-program to the follies is triggered by the bigger goals of deconstructing meaning in a public park. It is distinct from the previously discussed typical plan as there is no specific formal definition attached to it. None of the designed cubes are formally neutral. Tschumi's intention was to keep the follies empty of meaning and by this absence, stimulate a new kind of human occupation.[11] This removal of

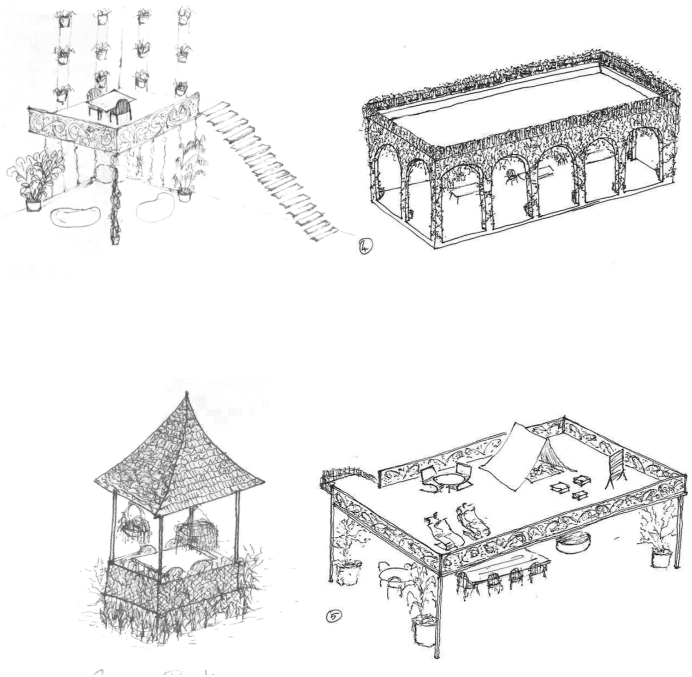
7 Le Fresnoy Art Centre, Tourcoing, 1991-97, Bernard Tschumi Architects, webpage.
8 Manolopoulou.Y., 2007, p.69.
9 Ibid.,
10 AD Classics: Parc de la Villette/Bernard Tschumi, Archdaily.
11 Jones.P.B., 1989, p.58.

the functional identity from architecture, also creates certain fluidity in the primary function housed.[12]

The park houses a number of urban cultural programs or events and this creates opportunities for use of the 'follies' as and when the need arises. The follies, which now house a functional typology or those that accommodate events are not real indicators of how these spaces are appropriated by the users. The actual everyday use is more evident from visitor photographs. The series of photographs indicate that very often users approach the follies akin to exhibition pavilions with awe and not with the intent of use. In some cases, they merely stay in the background and the 'surface' layer of the park acts as the platform to activity. However, the two cases where users actually use the built interface reflect a certain conditioned way of approaching built interface i.e. the presence of a staircase provokes the user to walk up the folly and the flat unarticulated wall face presents itself as a suitable interface to the child playing badminton. *These patterns of spatial perception reconstruct meaning and afford use to the follies. Consequently, the use of these patterns could guide the creation of unprogrammed space.*

Z Use of follies - Visitor photographs

12 Ibid.,



AA Public Outdoor room - Formal solutions

Build with qualities

A Pattern Language[13] is a referential tome of 253 such observed patterns compiled by Alexander.C. & Team. These patterns include all scales of built/urban space and proceed from larger spaces to small. While a small number of patterns are referred to by their function/activity like shopping street, sleeping in public, etc. the titles encompass a variety of approaches to space making. Each pattern describes a problem that has occurred in our environment over and over again. The core of the solution to the problem is discussed. Each pattern is also connected with larger and smaller patterns and this is also mentioned under each title. The surety with which, the authors state the solution also varies with each pattern and they are marked differently.

Let us examine the pattern *'69. Public outdoor room'*[14] (one of the patterns where the authors are sure of the invariant proposed), which attempts to propose a half-defined outdoor space for the community with a suggestive list of elements like sand lots etc. The authors speculate that if it is defined enough to make people stop there; they would start inhabiting the space with content as and how is deemed necessary. Thus the balance of 'openness' and 'closedness' will define the success of such a place. The actual formal solution described is very mildly suggestive. The sketch series show a quick selection of formal options that could fit in this pattern.[15] With very detailed instructions of how to approach every pattern, the book definitely intends to guide design solutions but it is not rigidly prescriptive. The actual design solutions are

13 Alexander.C., Ishikawa.S. & Silverstein.M., 1977.
14 See appendix 2 for full description of the pattern, p.97.
15 See plate AA.

meant to be layered by the superimposition of several relevant patterns. This leaves the designer with a series of options that could be defined and refined further based on the contextual constraints. This method of working is most suitable when the designer himself is the user and the needs are clearly understood. However, this is not the case in most professional situations where it is not feasible for architects to completely foresee how use in a space would transpire. Neither is it an easy task for every layperson to design all his/her own spatial needs.

While the compilation is useful in terms of understanding these patterns which exist, it does not adequately address the logic by which the patterns are sequenced or superimposed to create design solutions. Therefore it fails to function as an independent design method.

Conclusion

The three theories, which are discussed here, approach the idea of non-program from very different perspectives. Typical plan is a tool for defining unprogrammed space. The idea of such a space as understood from Tschumi's projects after removing their contextual attributes, emphasises on the presence of unplanned space for activity but fails to throw light on the factors that could guide the definition of unprogrammed space. Indicators of actual use in these unprogrammed spaces point to a certain set of spatial perceptions that condition people to appropriate space in a certain way. These patterns are similar to Christopher Alexander's documented patterns. The essential difference between these use-patterns and the tabulated intended functional program is two fold. Firstly, these patterns are based on observed actual use of space. Secondly, they attempt to address the multiplicity of human activity and do not flatten 'use' to a single terminology. These use patterns could guide the creation of the unprogrammed component of any architectural project by defining its characteristic qualities.

I'd like to see house that it is eighter partly a house and partly greenhouse or mix of them so that it is hard to say which one it is. At the summer time I would like that it is possible to open one wall so that then interior and a big summer terrace would form a one big common space. It would be nice that there is feeling that you are outside even when you are inside, trees and hammocks… Finnish summer is so short that I would like to make it a constant state.

Written brief from client, First meeting, 11 - 3 - 2015.


Anticipatory Architecture
Functionally malleable
Anticipates change of use rather than cater to it
Juxtaposition of program and non-program
Layered use - Mattolaituri
Synthesis of programmed and unprogrammed space
Freedom of use - Lacaton & Vassal building examples
Unprogrammed spaces in addition to programmed spaces
Winter Garden City - Pro Toto
Envisions a climatised urban square where typologies meld

ANTICIPATORY ARCHITECTURE

This chapter summarises the lessons from the previous exercises and arrives at the conjecture. The conjecture is then discussed with some case precedents.

Juxtaposition of Program and Non-program

Adaptable space can thus, be defined as a functionally malleable space that anticipates change of use rather than merely cater to it. Inclusion of unprogrammed space in an architectural design project has the potential of acting as a threshold that can soften the impact of change in use and enable the architecture to cope with the change. *While program addresses immediate intended needs and uses, non-program addresses the possibility of adaptation. Juxtaposition of both creates an architecture/design that anticipates layers of activity and is inclusive to changes post occupation.*

Unprogrammed spaces, here, are design-driven by certain spatial needs, characteristics or qualities other than function-driven ones; similar to the patterns enlisted in A Pattern language. The ambiguity of such spaces help loosening of the typological definition, but the presence of program provides the spine for organisation of architectural space. Interaction between these programmed and unprogrammed spaces create new dynamics of interstitial spaces in the built fabric. The dynamics of this interaction determine the typology of the built space rather than just the primary function.

The conjecture thus arrived at, is very general and intentionally, does not specify how the juxtaposition happens as several other factors like site, context and economic constraints will govern these decisions in every project. Also the biggest obstacle in the pragmatic application of this conjecture would arise from the need to substantiate the existence of this unprogrammed space. Consequently, it becomes necessary to associate the non-program to the program at some level. As an idea, it is

BB Mattolaituri - Layered Use

not entirely new to architecture or design discourse. This conscious juxtaposition has materialised in some built examples that are discussed as follows.

Layered Use

Mattolaiturit - The Finnish Wooden Platforms for washing carpets

The Finnish communal carpet-washing platforms that are built on the edge of the sea/lake are classic examples of anticipatory design. These wooden structures are built and maintained by the city authorities. The washing points are completely equipped for the purpose with a mangle and drying stands for carpets. Yet, the fact that the Finnish weather conditions facilitate the use of these platforms for less than half a year makes them partly redundant. As people increasingly switch to washing machines, these structures have become more irrelevant to their primary function. But as urban structures, they are fairly well used in most weather conditions. People appropriate the tables to spread food and have small informal dinner parties. There are also instances of these platforms being the location of after-parties. On summer days, unused platforms double up as a sun deck by the sea. In this example, there is no juxtaposition. Programmed and unprogrammed space meld together to make the platform. The brilliance of this design lies not in its addressing of the primary function but in the creation of a defined access to the water. It is this experiential quality of this design that triggers its appropriation for use other than the intended one. In a city like Helsinki, which has a long coastline but few beaches, this man-made interface manages to provide citizens with more pleasures than just communal washing.

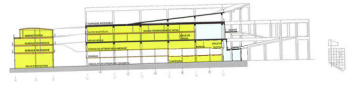
Freedom of Use

Lacaton & Vassal – building examples

The contemporary practice of 'Lacaton & Vassal' explores this juxtaposition at various scales in their projects. Fairly often, the unprogrammed spaces created, have allusions to the 'greenhouse' typology. Apart from affording an easy means to alter the scales of spaces quickly, the greenhouse typology also helps modulate and temper climate. This treatment of space does not demand excessive heating/cooling solutions. This also helps reduce maintenance costs of the 'unprogrammed space', while spatially defining a pleasurable space for habitation.[1] Most of these unprogrammed spaces are minimally defined, generously scaled and their material palette is stark. The layer of green adds the only vibrancy to these spaces and causes the architecture to recede to the background.

While most of their projects are focussed on housing, some public building typologies like the Architecture school at Nantes and the Polyvalent theatre 'Le Grand Sud' at Lille feature different approaches to this idea of juxtaposition.
The architecture school has ample double-height unprogrammed volumes that are referred to as 'free space for appropriation' and are linked to the program spaces. The strong connection to the programmed spaces differentiates this spatial volume from Tschumi's incongruous unprogrammed space in Fresnoy, affording it an increased possibility of appropriation. Thus the type of linkage between programmed and unprogrammed spaces becomes crucial for the materialisation of this concept.

1 Lacaton & Vassal 1993-2015, El Croquis, p.17.



Green - programmed
Blue - Unprogrammed

Unprogrammed volumes - Architecture school, Nantes.

Post-occupation use, Social housing, Mulhouse.

CC Freedom of Use - Lacaton & Vassal building projects

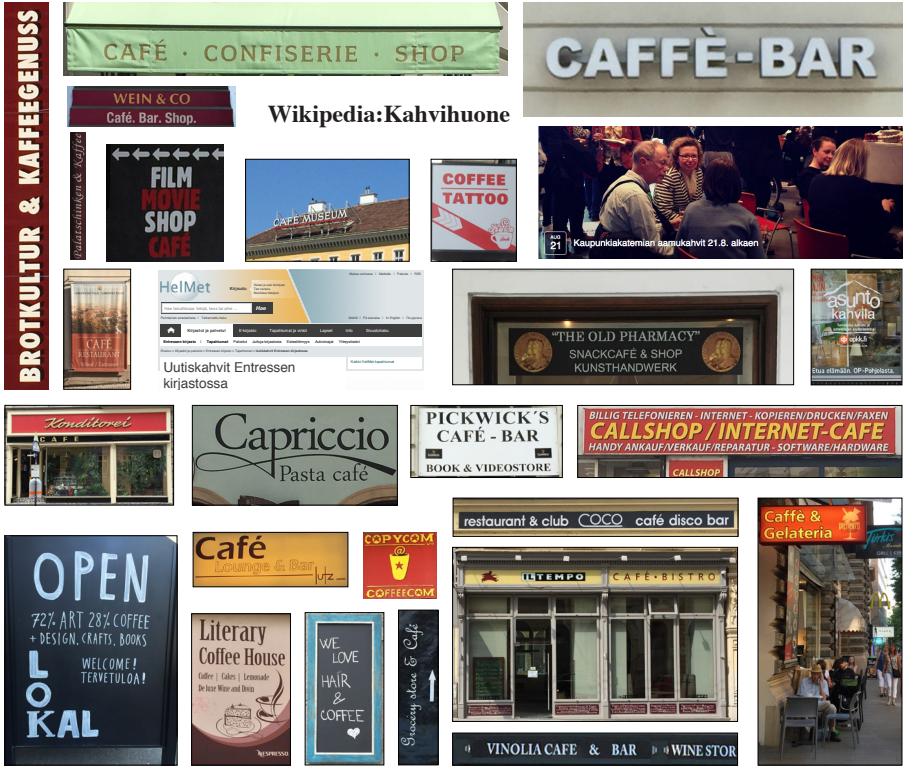
DD Väike – Õismäe Collective Space, Competition Entry, Pro Toto.

This idea of a climate controlled public space with no strict program definition is specifically relevant to northern climatic conditions where the city's public squares cease to function in the harsh winter. As a conceptual idea of bringing together agriculture and public space,[2] it is being studied by Pro-Toto, a Helsinki based research and design practice. Their proposal for Väike – Õismäe collective space competition is developed using this concept. The proposal creates a 10m high greenhouse superblock where function/activity is arbitrary and the huge space becomes a 'public living room'.[3] As an idea, this blending of different functions under a climatised space, which also embraces other new uses, seems relevant to creating anticipatory architecture.

2 Winter Garden City, Pro Toto
3 Väike – Õismäe Collective Space, Competition Entry, Pro Toto.

4.) Gym at our hotel at Tenerife, no walls at all and nicely on the pillars. (I like when house is lifted from a ground.)
5. From cafe at Berlin. I put this picture (my man in it) because I wanted to remind that the feeling has to be relaxed and not too polished and clinical. Sometimes scandinavian design is too pure and reduced in my opinion.
6.) To remind that playful is the must! Life is not boring so I think places don't have to be either:)

E-mail from client, dated 27 - 3 - 2015, exchange of some photos and links based on the first discussion



EE Contemporary urban signboards showing various combinations of activity that a café can spawn, support or co-exist with

IHANA KAHVILA

This chapter briefly deals with the history of the café typology, stating why it is a good test case for the conjecture. Ihana Kahvila, the proposed project has functioned as a summer container café in Helsinki since 2011. A short history of the café, project brief and the project drawings follow.

A café is never just a café

The café or coffeehouse, as a typology, has been subjected to a number of mutations and combinations. Apart from existing as an independent typology, it is the most common typological add-on to any bigger functional typology like a museum or library. There are also instances of a café metamorphosing to include other typologies such as bookshops. They also present a curious case, in terms of scale. They vary from tiny corner shops to the newly proposed sprawling 2000 square metre Starbucks café in New York[1] . In terms of the nature of space too, it is difficult to generalise this typology. Although they are supposed to be public places, in theory, a lot of cafés have a domestic air about them.

The typology had its beginnings in the early 16th century Ottoman Empire and its evolution can be traced with the spread of coffee drinking habits. The first café in present day Finland opened in Turku in the late 18th century.[2] The spread of the coffee beverage was coincident with the Age of Enlightenment. The advent of coffee, which was a sobering drink and the practice of consuming it in public places like coffeehouses had a significant role to play in the spread of the practice of rational questioning in that age.[3]

Even in the very beginning, cafés always transcended their primary function. They were centres of socialising and communing. People gathered in cafés to congregate,

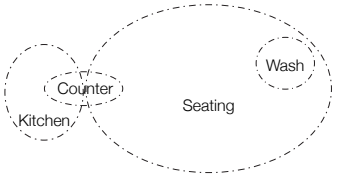
1 Starbucks building its biggest store ever: 'The Willy Wonka of Coffee', CNN Money, 06/04/2016.
2 Ojaniemi.T., 2010.
3 Standage.T., 2005.

FF Café, Kunsthistoriches Museum, Vienna.
The typology acts as an infill into a nodal space in a museum. The kitchen and counter are reduced to two parallel work surfaces and the seating is organised around the rest of the space illustrating the ease with which the café can adapt to any form.

talk, debate and entertain each other. The Café is the birthplace of the Encyclopaedia, the French Revolution, the Stock Market and other such significant historical developments.[4] The illustration[5] is a collage of contemporary urban signboards, which show a number of combinations of typology or activity that a café can spawn, support or co-exist with. This association of a social scenario and functional fluidity with the typology has also resulted in the term 'café' being paraphrased to refer to other activities that are not associated with coffee-drinking like Knowledge cafés, Café Lingua (language café) etc.

Finns are among the greatest consumers of coffee in the world.[6] Hence the typology has special relevance to Finland. The community portal of Wikipedia has been named to reflect the communal gathering place that is culturally associated with every language. For example the page in French reads *Le Bistro*. The page in Finnish reads *Kahvihuone* (Coffee room) indicating the significance of the typology to the Finnish society.

A generic program of the café consists of the kitchen, counter, seating area and wash facilities. Apart from the connection between the kitchen and the counter, functional considerations are minimal in this typology. The seating part of the café is proportionately the biggest in terms of spatial requirement. The creation of a space suitable for sitting and enjoying a cup of coffee is a fairly simple task. Very often, it is oriented towards important views from the place or has some other additional layer of meaning to it. This space blurs the strict definitions of program and non-program.



Generic bubble diagram of a café

The simplicity of the program also allows it to function well in spaces that are not purpose-built. The photo spread,[7] which shows a café as an infill into a nodal space in a museum illustrates the ease with which this typology can adapt to any form. As can be seen from the photo, it is the loosely defined nature of the seating part of the typological program that is the reason behind the mutability of the typology. As such, this ambiguous nature of the typology presents questions of its suitability to test the conjecture at hand. Ihana Kahvila proves itself as a good test case since its role as a service provider to the Kalasatama area is set to change considerably.

4 Coffeehouse, Wikipedia.
5 See plate EE.
6 Ojaniemi.T., 2010.
7 See plate FF

GG Ihana Kahvila - The summer café

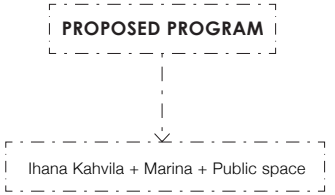
Ihana Kahvila

Kalasatama Temporary

The Kalasatama area, which is close to the centre of the city of Helsinki, was home to a harbour, which was moved to Vuosaari in 2008. The area is to be rebuilt with housing for 20000 residents and office buildings for 8000 workers.[1] Kalasatama Temporary was an urban re-vitalisation project executed in the period 2009 – 2011. It was organised with the idea of helping citizens reclaim this space. Several participatory activities like urban gardening, bicycle brunches, self-built skate parks and saunas were initiated to activate the newly available area. Ihana Kahvila is a container café that was set up as part of the Kalasatama Temporary. It occupies a spot along the sea with a view that is directed towards the historic centre in the South. The two containers that define the boundary and frame the view also house the kitchen/counter and the wash facilities. The containers were sourced with the help of the city authorities and are reminders of Kalasatama's industrial past.

The café has been functioning every summer since and has been a huge success. The open sunniness of the space, proximity to the sea, views to the city, assorted seating arrangements like bean bags and fat boys that are constantly re-arranged as the visitors desire, small sand-boxes and toys to keep the children entertained are some of the elements that come together to create this small habitable and pleasurable alcove that starkly contrasts with the surrounding building wasteland.

1 Kalasatama, Official brochure.



Sanni Jouhki, the entrepreneur behind this café has proposed to move into a more permanent structure when Kalasatama is rebuilt. There is also a need to provide services to the boat owners of the adjacent marina. Sanni plans to cater to the boat owners and also run the café simultaneously. This modification of the typological program slightly increases the complexity of the program. Her visions for the café and other services also open up new possibilities of creating a new activated public waterfront. The city authorities also foresee the need for new public services that might arise post occupation. The design proposal will be executed when the Nihti region is rebuilt and it will be funded by the city, in part, as it will also accommodate some public services.

This synthesis of typology, the location of the site and the capacity of the typology to serve as a neutral public space make it an interesting test case for the conjecture arrived at.

Juxtaposition of program and non-program

Program

A detailed room programme describing the intended functions of the café and the marina was prepared based on the discussions with the client. The program, as such, is simple and helps quantify the spatial needs. But it is not necessarily completely adhered to, in view of the new services that the built space will house. Since neither the formal solution nor the exact nature of the juxtaposition was clearly in sight then, I followed the generic needs of the typology in the making of the room programme.

Non-program

Non-program, in this case, has a two-fold meaning. It is comprised of all the unforeseen but expected public services of the new development in Kalsatama and the generic unprogrammed space that acts as a threshold to absorb change. The character of this space is already partly defined by the context, the location adjacent to the sea and the neutral public nature of the activities that will be housed. The idea of creating a climate-controlled public urban space with a possibility of functioning as the open urban square during the harsh winters in Finland is the major driver in the design of the unprogrammed space.

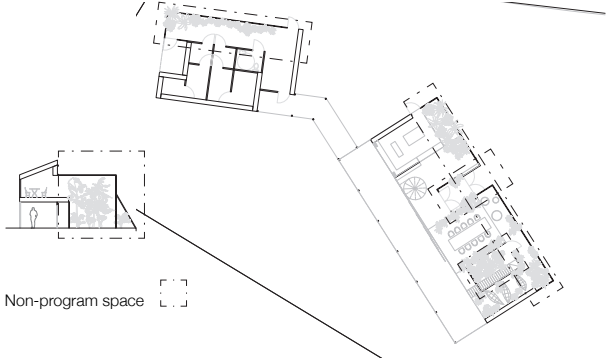
Room programme

		kpl	*a (m^2)*	*Total (m^2)*
Café area				143,7
Entrance			10	10
Coat rack		65	0,1	6,5
Serving area			7,5	7,5
Cash desk			2,5	2,5
Seating area		65	1,5	100
Dish return			1	1
Toilets		WC (W) - 2 WC (M) - 1, Urinal - 1 Accessible WC Wash	1,2 1,2 + 1 4,6 7	2,4 2,2 4,6 7
Kitchen				38,5
Preparation			3	3
Cooking/ Working area			15	15

Service			6	6
Dish wash area			8	8
Dish storage			3	3
Cold storage			1,5	1,5
Store			2	2
Staff/ Admin				35
Shower/ WC (M)		1	3	3
Shower/ WC (W)		1	3	3
Admin				25
Lockers			4	4
Marina - Services				51
Sauna		2	10	20
Shower/ WC (M)		1	3	3
Shower/ WC (W)		1	3	3
Deli			20	20
Lockers			5	5
Services				27,5
Service entrance			4,5	4,5
Storage			15	15
Cleaning Cupboards			2	2
Garbage			4	4
Technical spaces			2	2
Outdoor spaces				106
Terrace		50	2	100
Smoking area			6	6
				401,7

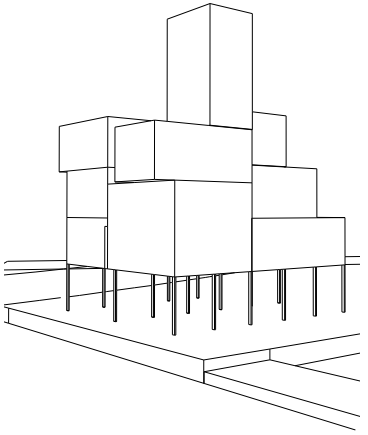
Process of juxtaposition

Some schemes of the juxtaposition were developed as the next step of the design process.



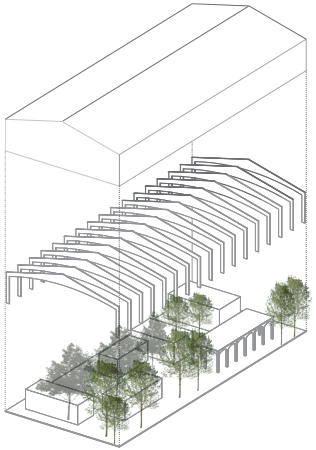
Scheme 1

This scheme splits the two main typological programs as separate volumes. The smaller functional cores are then alternated with non-program spaces. So the floor plans are developed in bands of program and non-program alternating each other. Residual spaces are provided with ample space to receive new layers of activity. The separation of the typological program brings in some specificity to the design. The juxtaposition works well in the immediately proposed context but fails to anticipate change.



Scheme 2

This scheme presents a scenario where the entire ground is left open for the public creating a shaded but defined unprogrammed space and the programmed volumes are raised on stilts above.
There is no real interaction between the program and non-program. This scheme also presented a lot of pragmatic problems in terms of the height difference and the cold dark space it creates underneath the built volumes. So it was abandoned as a sketch.



The selected scheme

The sketch of this scheme starts out with the creation of a generic space that follows the lessons from the discussion of the typical plan. The layer of vegetation that is introduced aids climate-control due to the metabolism of the plants and the glass skin that is provided creates a greenhouse. They also help create the desired sense of scale in the huge enclosure. The programmed volumes float in the bigger space. The bigger volume is not insulated; creating a semi-warm space that is more protected than the outdoor squares in the winter. The smaller programmed spaces are insulated and heated.

The differently proportioned unprogrammed spaces are not the leftover spaces of the program but are consciously created in a manner that they partly aid the adjacent programmed spaces and partly create other layers of meaning pertaining to the context of execution. So they do not exist as independent unprogrammed spaces but have a symbiotic relationship to the program. The smaller volumes are constructed similar to exhibition pavilions and can be easily dismantled and rebuilt to suit new needs. This possibility and the ease of it further advance the idea of adaptability. So, in theory, the dynamics between program and non-program are constantly in flux.

HH Conceptual model studying the selected scheme

II Location map showing public buildings in the vicinity.
Scale 1:20000

Café as public urban space

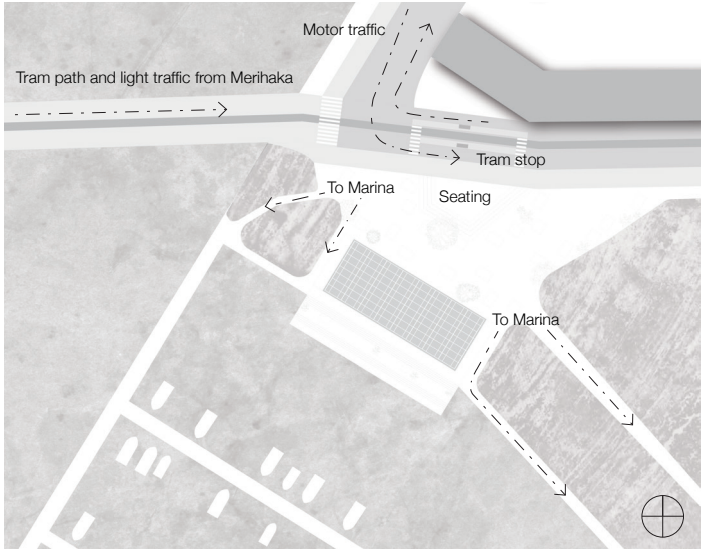
One of the major ideas in the re-development of the Kalasatama area is to open up the entire coastline for public use. At this stage, the master plan does not have much public open space or public buildings in the vicinity. The closest service node is at the centre of Kalsatama. There is a need for creation of a common public space in addition to the seaside promenades. The project attempts to address the needs of the café, the marina, other new unforeseen services and the need for a public space in Kalasatama. The café is proposed as the built public urban space, which defines an urban square by virtue of its location and leads to the waterfront.

The built space design tests the theoretical conjecture of juxtaposing programmed and unprogrammed space. The program in this case is semi-defined as only the services to the marina and the café are the known intended functions. Although the possibility of other services being included has been acknowledged, it is not possible to foresee what they could be at this stage of the planning. The undefined nature of the context and the content increase the complexity of the expected adaptability of the building.

1 Kulttuurisauna
2 Suvilahti Cultural Centre
3 Kalasatama Shopping Centre
4 Kalasatama Public School
5 Korkeasaari zoo
6 Proposed project - Ihana Kahvila as a public space

Market square *Kauppatori* | Square at Hakaniemi | Proposed square

JJ Scale Comparison
Public squares in Helsinki
Scale 1:10000



KK Surrounding plan
Creation of the public square
Scale 1:2000

Public square ⇢ Greenhouse ⇢ Waterfront

Ihana Kahvila, as it exists today in Kalasatama, is located at the end of a series of construction sites. The route to the café is long and rough unlike the well-tended roads in the city with defined paths for light, pedestrian and motor traffic. When the Kalasatama Temporary project was fully active, the region saw a flurry of activity. The container café has survived well beyond the initial activity and has been a success every summer. This success, despite the unpleasant access conditions can be attributed to its unique quality of openness and enclosure that is best suited to the summer.

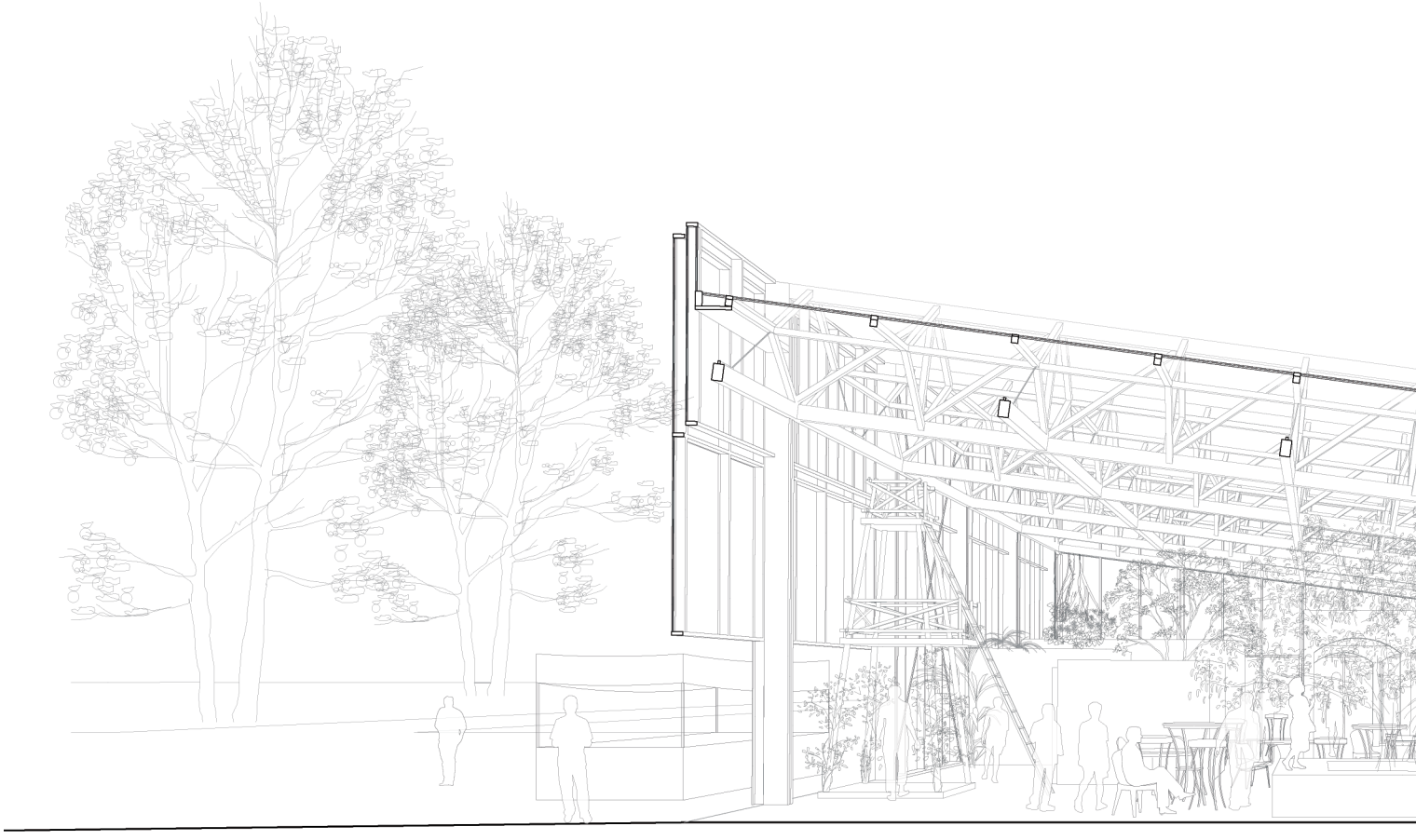
At the moment, it is the only urban part of the Southern tip of Kalasatama with barren worksites all around it. When the city is rebuilt, it will re-engage with the urban fabric and attempt to create the same atmosphere by a blurring of the inside and the outside. This blurring is particularly challenging in the Finnish weather conditions.

The built space is located in the same spot that it occupies today and defines an urban square by virtue of its location; at the confluence of the tram paths and access to the marina. Although the square is urban in nature, it is much smaller in terms of scale as compared to the square in Hakaniemi and the Market square near the South Harbour. It is a small public square intended for the neighbourhood.

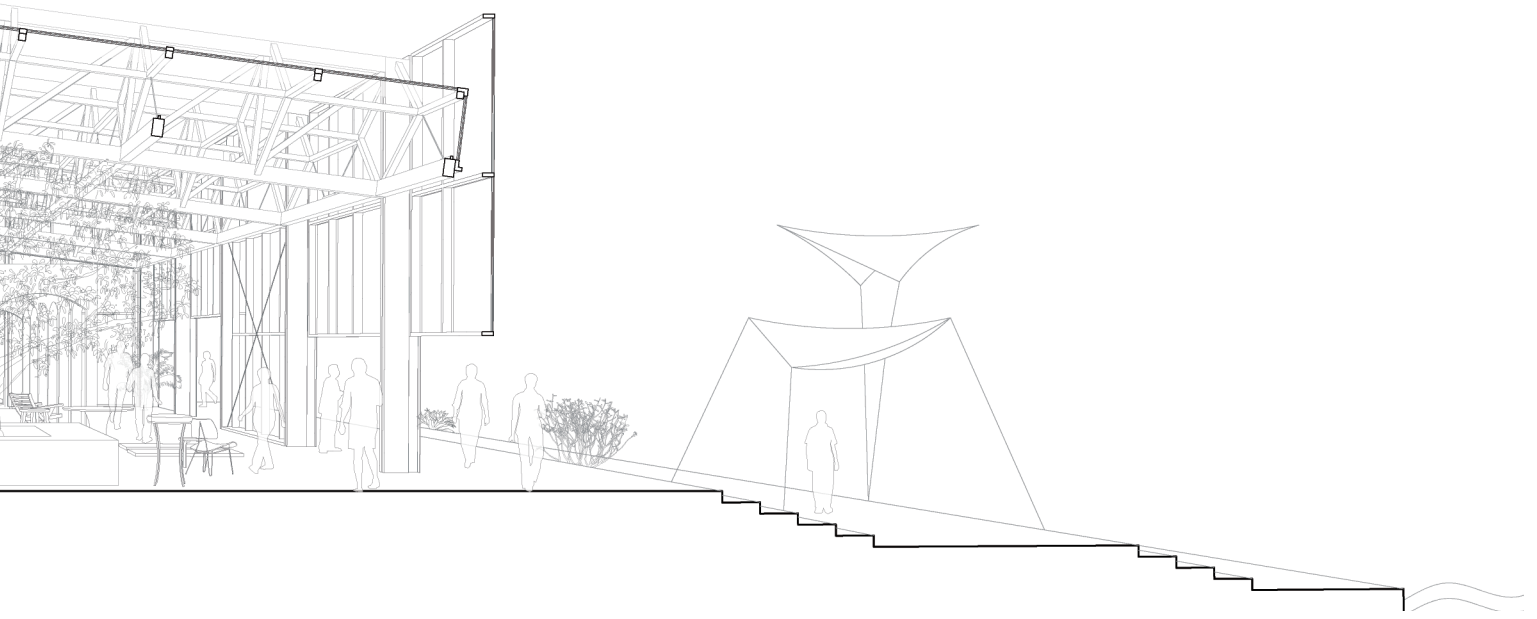
Currently, the café is close to the water but there is no access to it. The proposal defines an access to the waterfront, which doubles up as an open terrace by the sea.

The outer greenhouse volume occupies a footprint that is larger than the sum arrived at with the room programme. This aspect, which is the obvious implication of the addition of unprogrammed space, is partly justified as it affords more space for future expansion. By keeping the structure as generic and unspecific as possible and by resorting to the use of readily available cheap construction materials, the construction costs of the greenhouse are kept within plausible limits.

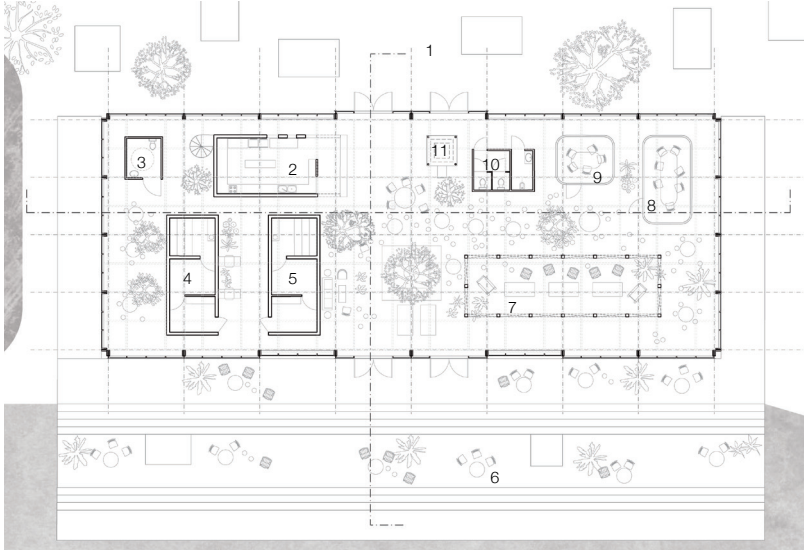
By acting as this link between the public street interface and the waterfront, the greenhouse itself morphs into a public space that in the summer provides a shaded access to the sea from the city and in the winter becomes a semi-comfortable public square.



LL Sectional Perspective
Inside - Outside blurring in summer
Section at Scale 1:100



MM View from the sea
Semi - warm public square in the winter

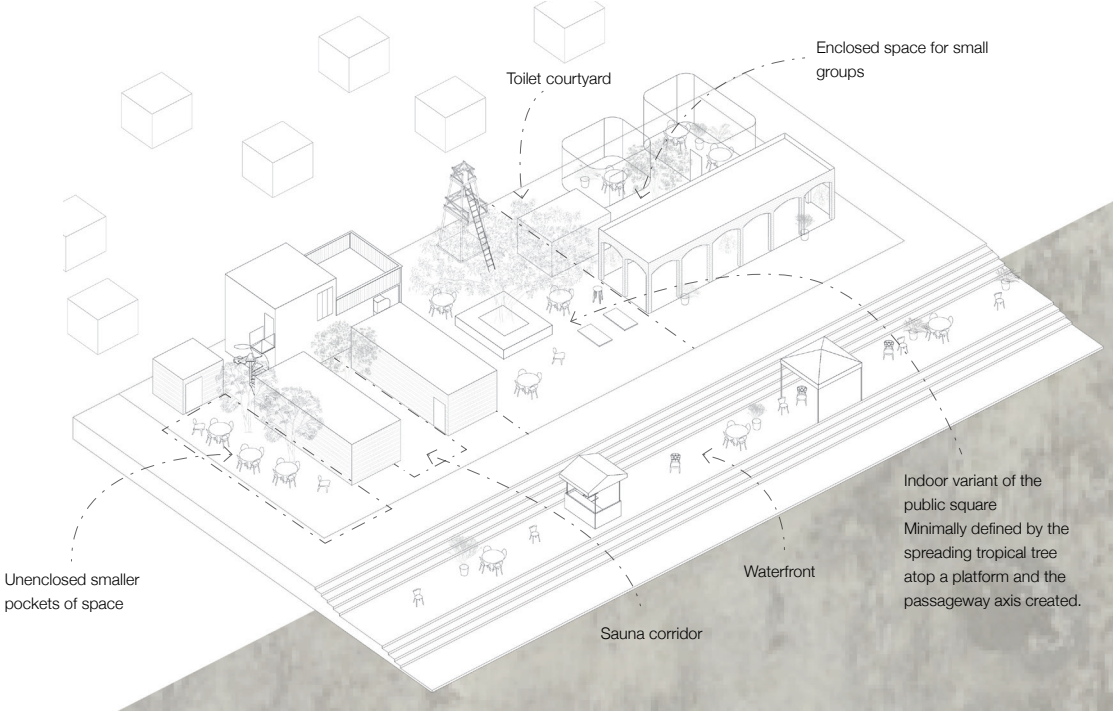


NN Floor plan showing programmed spaces
Scale 1:500

1	Neighbourhood square with pop-up stalls	7	Lounge pavilion
2	Kitchen + Staff facilities above	8 & 9	Rentable spaces for small group meetings
3	Accessible WC	10	Toilets
4 & 5	Rentable sauna	11	Viewing tower
6	Waterfront/ Outdoor terrace		

Programmed spaces

Only the absolute essentials of the room programme have been translated into built pavilions here. Programs of secondary importance such as the deli shop, which could be integrated into the non-program space with minimal furniture arrangement adjacent to the counter, have not been defined by built space. The design idea was to keep the outer container as non-specific as possible. So separate service entrances to the café have not been defined. However the pavilions are placed in a way that does not compromise on the efficiency of their functioning. The seating part of the program, which blurs the distinction between program and non-program, has been defined to create different spatial experiences. Apart from the smaller groups of furniture that blend into the non-program space, an arcaded lounge pavilion that is intended for long-drawn relaxation; private glass cubicles that could be rented for small group meetings, but otherwise act as café seating; a viewing tower that gives visitors a bird's eye view of the whole space are added. The built spaces adjacent to the waterfront are intentionally kept transparent so that a visitor entering from the city square could immediately have view to the sea.



OO Axonometric view showing unprogrammed spaces
Scale: 1:500

Unprogrammed spaces

Some unprogrammed spaces are subservient to the program. They act more as a value addition than a necessity. For example, the corridor between the saunas and the courtyard in front of the toilets. Some of the bigger spaces are also created by overlaying few patterns from the pattern language.

Enclosed space for small groups
Patterns: A Place to Wait, Small meeting rooms, Different chairs, Sequence of sitting spaces.

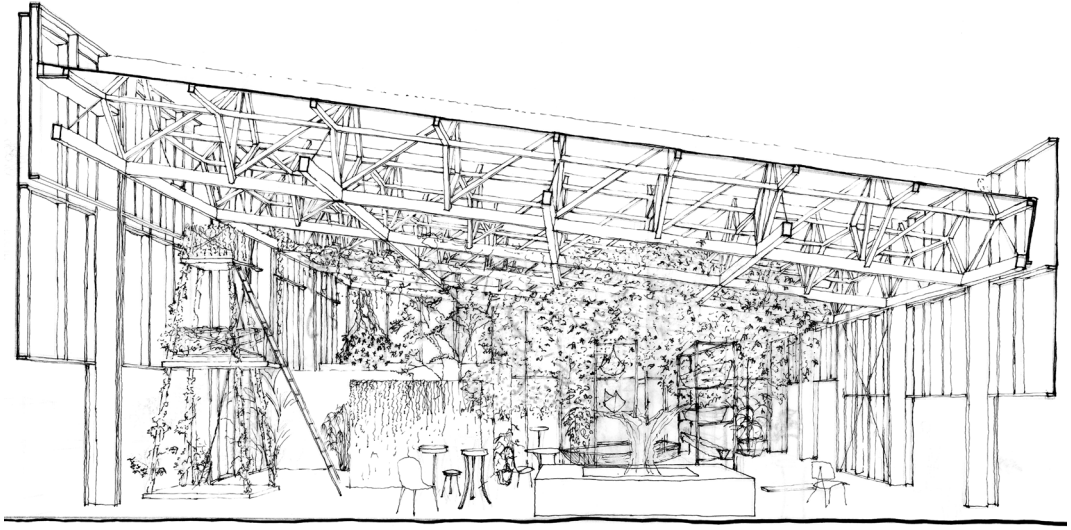
Indoor variant of the public square
Patterns: Promenade, Pedestrian street, Building thoroughfare, Small public squares, Street café, Something roughly in the middle, Public outdoor room, Tree places.

Waterfront
Patterns: South facing outdoors, Stair seats, Staircase as a stage, Open stairs.

Unenclosed smaller pockets of space
Patterns: Quiet backs, Short passages, Indoor sunlight, Garden seat.

Examination of possibilities

The pavilions are temporary built spaces. They can be dismantled and replaced depending on the needs as they arise. The project description drawings capture the immediately foreseen use of this space. It is also imperative to examine the possibilities that this idea creates. This graphic, which is a hand-drawn overlay of the sectional perspective presented previously shows the lounge pavilion replaced by boat storage, which is a possible outcome. The city will be involved in the funding and maintenance of this project. This drawing suggests possibilities of opening up the space to general public use.



PP Examination of possibilities showing the lounge pavilion replaced by boat storage

Structure and Ventilation

(All measurements in mm)

Structure

The structure was designed to match the non-specificity of the container. However, the greenhouse typology requires some special ventilation options. Hence this need has been combined with the structural system and can be seen in the details of the secondary structure.

1) *Primary Structure*

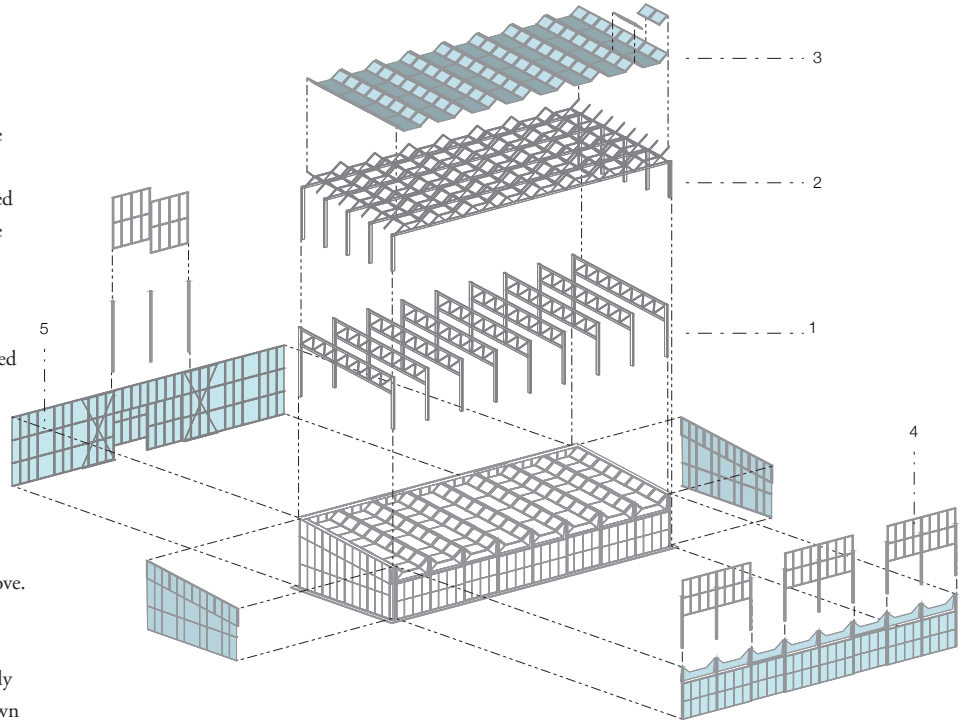
Columns - 2 x 360 x 75 laminated timber sections connected by 40mm thick glulam board.
Chords - 140 x 225 glulam sections.
Web members - 90 X 90 glulam sections.

2) *Secondary Structure*

All members are 90 x 90 glulam sections. They provide the framework for the openable roof window system that rests above.

3) *Roof window system*

The greenhouse needs good ventilation on the roof especially in the summers. All the sloping surfaces of the roof are as shown in the exploded view are designed as automated openable (triple glazed)windows.



QQ Exploded axonometric of the structural system

4) *South wall*

The largest heat gain of the greenhouse is from this wall. Hence it is triple glazed and not insulated. In the summer, six of the eight bays can be opened. The vertically sliding doors are operated by a motorised system of pulley & counter weight.

5) *North wall*

There is more heat loss than gain through this surface. To improve the working, this wall has insulated glass that helps reduce heat loss.

Ventilation

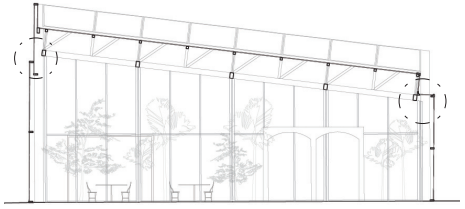
The design idea of integrating the inside and the outside and the presence of vegetation inside the space present a double challenge in terms of ventilation.

Case 1: Winter

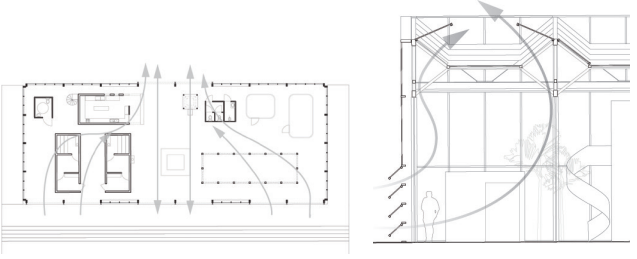
The sliding doors are shut and entry/exit is only through the ground-level doors. The junction of the sliding doors and the walls is provided with overlap of glazing and air sealant material to ensure that the cold winter air does not enter the space.

Case 2: Summer

The sliding doors are opened during the daytime making the whole space almost open. At night, the top - hinged windows of the East and West wall work with the roof window system to maintain habitable room temparature.



Case: Winter - Cross-section - Junction is air-sealed.



Case: Summer - Plan & Longitudinal-section - Intense cross-ventilation is possible.

RR Ventilation diagrams

EPILOGUE

The body of the thesis focuses very specifically on the prescriptive aspect of the typological definition. Deconstruction of this prescriptive role also dilutes the descriptive role. This is a critical writing exercise that I undertook with the intent of understanding the importance of the typological definition in the descriptive realm. This write-up approaches the same questions emphasizing on the descriptive aspect of the typological definition and thereby throws light on the reasons for the predominance of the room programme. The exercise follows the guidelines set by a brief from my previous theoretical studio course of Spring 2014.[1]

1 A-60.2340 – A Personal Architecture, Spring 2014, Teachers: Toivonen.T., Tsuboi.N., For the brief, see Appendix 3, p.99.

OPINION

Why can't a café just be a café?

Lucida Viner

With the moving out of the harbours, architects and planners in Helsinki have had the rare opportunity to design a dense urban settlement from scratch. Kalasatama, especially has been similar to a laboratory. The levels of architectural experimentation and excitement have reached an unprecedented high in this part of the city. The shopping centre towers, high-rise wooden apartments and the iconic school building are some examples that stand out. There are also smaller points of interest scattered around the new urban fabric.

The new tram route that runs eastward from Hakaniemi was inaugurated last week. As I was riding this route, I was surprised to spot a small public square almost at the edge of the Kalasatama peninsula. It seemed to be bustling with quite a lot of activity for a late autumn evening. Since a greenhouse was visible just beyond the square, I expected to find a plant market on the square. But it seemed like a regular market square in Helsinki with the usual bakers – café - berries & potatoes fare. It was not so much the content of the stalls that activated the space. Unlike the bigger squares in the city like the one at Hakaniemi, this one was small and so seemed to be more densely inhabited.

At the edge of the square one expects to find a *Kauppahalli* (Shopping hall) as exists adjacent to the square in Hietalahti, Kauppatori and Hakaniemi. This greenhouse seems to resemble one of those spaces except for its glass façade. Since it seemed to be open to visitors I decided to check it out. After all, its not often that one finds a greenhouse at the seafront. Upon entering, I was in for yet another surprise, not necessarily pleasant this time, the space looked more like a warehouse than a greenhouse. Although I was delighted to find that Ihana Kahvila had shifted into the huge space. Despite the cosy atmosphere around the counter of the café, there was an air of restlessness about the place. The inside was even more full of people than the square outside, that it reminded me of Kaivopuisto on a Vappu day. There were small groups of teenagers hovering around the small gazebos not necessarily doing anything specific. It seemed completely open to the public and there was no ticket at the door. All the small enclosures seem temporarily made. Maybe they will be replaced by something else in future. In some ways, this space felt like a man-made park inside a building. It is difficult to associate it with a specific typology.

I fondly look back to several lovely summer days by the sea spent in the open when Ihana Kahvila was a container café. That tiny alcove had the right amount of anarchy. This new space, which is run in co-operation with the city is characterised by overwhelming chaos. As a visitor I could appreciate the newness of the idea. However, I shudder to think of the mishaps that could occur if all this activity were allowed to continue. For instance there were two men from the nearby marina who wanted to store their boats for the winter. Seemingly, that was going to be allowed. This kind of anarchist space cannot be sustained in the long run. There has to be some form of control to keep vandalism in check.

There are possibilities of renting small meeting rooms for group work and it is hoped that this might help cover costs. While the idea seems promising and pleasant, one is also reminded of tragic fate of Gardenia in Viiki, which was a similar tropical garden that had to be shut down, as it was not profitable.

Setting aside my scepticism of the working model, I really appreciate the treatment to the seafront. Helsinki deserves more of this neutral and gradual descent to water. I can already see the space being a favourite among the neighbourhood people who ice-skate on the sea in the winter. However, it would have helped to have a bolder definition of this access. The sloping surfaces around the opera house in Oslo are a good example to cite here. That kind of definition of space would ensure more visitors from other parts of the city as well.

Personally, the working of this space is a bit too intense for my liking. It would have been better if the built space helped direct the visitors on what activity occurs there. The greenhouse is not architecturally spectacular. The tiny pavilions scattered between the greenery make it even are more disorienting and confusing. It might have been a simpler idea to build a tiny ordinary café with a few wide windows looking to the sea. What more does one need to enjoy a cup of coffee? Why can't a café just be a café?

Lucida Viner is a writer and travel journalist. She has written extensively on art, architecture, urban life and travel. She describes herself as a journalist whose commentary on art, architecture and society always sought to be incisive, triggering enquiry into pivotal contemporary issues. She lives in Helsinki.

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Plate B: Image from personal blog
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Plate E: Connection diagram – Scanned image from Time Saver Standards for Building types (Second Edition), Edited by De Chiara.J. and Callender.J.H., 1983, p.79. Other diagrams by author.

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Right - Photograph by author (2012)

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https://www.bonappetour.com/assets/images/asset_pictures/1459309312-3208076.jpeg
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Plate Z: Picture order from left
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Plate AA: Sketches by author.

Plate BB: Photographs by author (2015)

Plate CC: Left:http://www.architectural-review.com/Journals/8/Files/2010/6/9/nantesschool.jpg
Right:http://www.spatialagency.net/2010/08/11/lacatonvassal_3-960x640.jpg

Plate DD: Väike – Óismäe Collective Space, Competition entry, Honorary mention, Pro Toto,
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Plate EE: Photographs by author (2015)

Plate FF: Photograph by author (2015)

Plate GG: Left: http://www.uuttahelsinkia.fi/sites/default/files/styles/article_carousel/public/alueen-artikkelisivu/2013-05/ihanakahvila_2011_64110.jpg?itok=S1r2nl5m
Middle: Photograph by author (2015)
Right: Image from official website, http://ihanakahvila.fi/

Plate HH – RR: All project drawings, Images and model photographs by author.

Appendix 1

Kitchen Work Triangle

The following are the thumb rules of the kitchen work triangle concept used for efficient residential kitchen layouts. The three points of the triangle are the stove, refrigerator and dish wash.

- No leg of the triangle should be less than 1.2 m or more than 2.7 m.
- The sum of all three sides of the triangle should be between 4.0 m and 7.9 m.
- Cabinets or other obstacles should not intersect any leg of the triangle by more than 30 cm.
- If possible, there should be no major traffic flow through the triangle.
- A full-height obstacle, such as a tall cabinet, should not come between any two points of the triangle.

Other guidelines for spacing include

- As measured between countertops and cabinets or appliances,work aisles should be no less than 110 cm for one cook or 120 cm for multiple cooks.
- A sink should have a clear counter area of at least 61 cm on one side and at least 46 cm on the other side.
- A refrigerator should have a clear counter area of at least 38 cm on the handle side; or the same on either side of a side-by-side refrigerator; or the same area on a counter no more than 120 cm across from the refrig erator.
- A stove or cooktop should have a clear 38 cm area on one side, and at least 30 cm on the other side.
- At least 91 cm of food preparation area should be located next to the sink.
- In a seating area where no traffic passes behind the diner, allow 81 cm from the wall to the edge of the table or counter; if traffic passes behind the diner, allow 110 cm.

Source: *Wikipedia*

69 PUBLIC OUTDOOR ROOM**

. . . the common land in MAIN GATEWAYS (53), ACCESSIBLE GREEN (60), SMALL PUBLIC SQUARES (61), COMMON LAND (67), PEDESTRIAN STREET (100), PATHS AND GOALS (120) needs at least some place where hanging out and being "out" in public become possible. For this purpose it is necessary to distinguish one part of the common land and to define it with a little more elaboration. Also, if none of the larger patterns exist yet, this pattern can act as a nucleus, and help them to crystallize around it.

✣ ✣ ✣

There are very few spots along the streets of modern towns and neighborhoods where people can hang out, comfortably, for hours at a time.

Men seek corner beer shops, where they spend hours talking and drinking; teenagers, especially boys, choose special corners too, where they hang around, waiting for their friends. Old people like a special spot to go to, where they can expect to find others; small children need sand lots, mud, plants, and water to play with in the open; young mothers who go to watch their children often use the children's play as an opportunity to meet and talk with other mothers.

Because of the diverse and casual nature of these activities, they require a space which has a subtle balance of being defined and yet not too defined, so that any activity which is natural to the neighborhood at any given time can develop freely and yet has something to start from.

For example, it would be possible to leave an outdoor room unfinished, with the understanding it can be finished by people who live nearby, to fill whatever needs seem most pressing. It may need sand, or water faucets, or play equipment for small children—ADVENTURE PLAYGROUND (73); it may have steps and seats, where teenagers can meet—TEENAGE SOCIETY (84); someone may build a small bar or coffee shop in a house that opens into the area, with an arcade, making the arcade a place to eat and

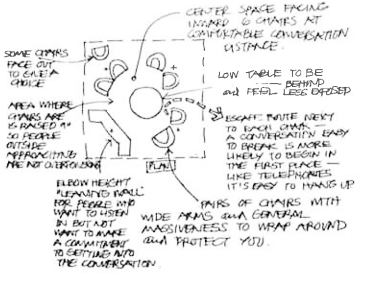
drink—FOOD STANDS (93); there may be games like chess and checkers for old people.

Modern housing projects especially suffer from the lack of this kind of space. When indoor community rooms are provided, they are rarely used. People don't want to plunge into a situation which they don't know; and the degree of involvement created in such an enclosed space is too intimate to allow a casual passing interest to build up gradually. On the other hand, vacant land is not enclosed enough. It takes years for anything to happen on vacant land; it provides too little shelter, and too little "reason to be there."

What is needed is a framework which is just enough defined so that people naturally tend to stop there; and so that curiosity naturally takes people there, and invites them to stay. Then, once community groups begin to gravitate toward this framework, there is a good chance that they will themselves, if they are permitted, create an environment which is appropriate to their activities.

We conjecture that a small open space, roofed, with columns, but without walls at least in part, will just about provide the necessary balance of "openness" and "closedness."

A beautiful example of the pattern was built by Dave Chapin and George Gordon with architecture students from Case Western Reserve in Cleveland, Ohio. They built a sequence of public out-



Public outdoor room built by Chapin and Gordon in Cleveland, Ohio.

door rooms on the grounds and on the public land surrounding a local mental health clinic. According to staff reports, these places changed the life of the clinic dramatically: many more people than had been usual were drawn into the outdoors, public talk was more animated, outdoor space that had always been dominated by automobiles suddenly became human and the cars had to inch along.

In all, Chapin and Gordon and their crew built seven public outdoor rooms in the neighborhood. Each one was slightly different, varying according to views, orientation, size.

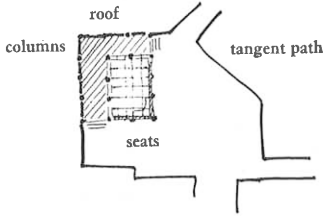
We have also discovered a version of this pattern from medieval society. Apparently, in the twelfth and thirteenth centuries there were many such public structures dotted through the towns. They were the scene of auctions, open-air meetings, and market fairs. They are very much in the spirit of the places we are proposing for neighborhoods and work communities.

Outdoor rooms in England and Peru.

Therefore:

In every neighborhood and work community, make a

piece of the common land into an outdoor room—a partly enclosed place, with some roof, columns, without walls, perhaps with a trellis; place it beside an important path and within view of many homes and workshops.



Place the outdoor room where several paths are tangent to it, like any other common area—COMMON AREAS AT THE HEART (129); in the bulge of a path—PATH SHAPE (121); or around a square—ACTIVITY POCKETS (124); use surrounding BUILDING EDGES (160) to define part of it; build it like any smaller outdoor room, with columns, and half-trellised roofs—OUTDOOR ROOM (163); perhaps put an open courtyard next to it—COURTYARDS WHICH LIVE (115), an ARCADE (119) around the edge, or other simple cover—CANVAS ROOFS (244), and seats for casual sitting—STAIR SEATS (125), SEAT SPOTS (241). . . .

Appendix 3

A THEORY OF ARCHITECTURE COURSE

A PERSONAL ARCHITECTURE

18.2.2014

Task VI:
AN ANALYSIS, A CRITIQUE

Choose a project you have done recently.

Prepare an analysis and critique of this work for an imaginary publication of architecture theory and criticism. Write in third person, give the text a title, and sign it with a nom de plume of your choice. Consider the project from the point of view of a future independent critic, writing about your early student work indicative of things to come. You can consider architectural themes, design decisions, aesthetic preferences, ethic and moral undertones and various influences that can be read in or projected onto the project. Try to discover something about your work that you have not been aware of, or been able to articulate. Avoid writing a project description, and assume the audience already knows your subject, pick images to accompany your article if necessary.

Length: 300-800 words plus captions, 1-3 images on A4 paper..

THANKS

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